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Mhendislięi Konferansı**

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Telif Hakkı

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	ID	Title	Authors	Pages
NLP	1850	HTV-News: A New Dataset with High Novelty Rate for Turkish Text Summarization	Nihal Zuhal Kayalı Sevinç İlhan Omurca	1 - 6
	1853	Sentiment Analysis of Social Network Comments in Uzbek Language	Saboxat Allanazarova	7 - 10
	1861	An Online Platform for Uzbek-Russian and Russian-Uzbek Parallel Corpora	Nigmatova Lolakhon Khamidovna Saidova Mokhira Rasulevna Djuraeva Zulkhumor Radzhabovna Sharipov Sokhib Salimovich Avezov Sukhrob Sobirovich	11 - 16
	1863	Yapım Ekleri ile Özbekçe Sözcük Türetme Deriving Uzbek Words with Derivational Suffixes	Eşref Adalı Khamroeva Shahlo Mirdjonovna	17 - 21
	1864	Database of Grammatical Form and Meaning Correspondence for Uzbek-English Translation Software	Jamoliddinova Odina Rasulovna Muhammedova Saodat Xudoyberdiyevna Khamroeva Shahlo Mirdjanovna Ergasheva Guli Ismoil Qizi Qodirova Madinabonu Murodjon qizi Kholova Muyassar	22 - 26
	1868	Words Speak Louder Than Actions: Decoding Emotions Through NLP	Melda Paksoy Gokhan Bakal	27 - 31
	1872	Özbek Dilinin Pankronik Derleminin Oluşturulması (Kutadgu bilig’ Nüshalarına Göre)	Xamroyeva Şahlo Mircanovna Avezova Nigora Safarovna Toştemirova Sitara Bahodir kızı Qodirova Fazilat Şukurovna Atanazarova Shoxida Baxramovna	32 - 37
	1873	Preserving Semantic Integrity in Paraphrasing Texts: Rule-Based Paraphrasing	Zarnigor M. Khayatova Jurakuziyev Nodirbek Kholova Muyassar	38 - 42
	1975	NLLB-Based Uzbek NMT: Leveraging Multisource Data	Nilufar Abdurakhmonova Adkham Zokhirov Mohirdev Mukhammadali Salokhiddinov Anvar Narzullayev Ayrat Gatiatullin	43 - 47
	1976	The Problem of the Archaic Words’ Semantic Description in the Alisher Navoi Authorship Corpus	Shuhrat Sirojiddinov Manzura Abjalova Sulton Normamatov Nargiza Gulomova	48 - 53
	1979	Multi-Label Emotion Classification with Fine-Tuned BERT and Contrastive Learning	Ammara Naseem Khan Mehmet Nafiz Aydın	54 - 59
	1885	Algorithm for Aligning Paragraphs and Sentences in Aligner Tool	Elov Botir Boltayevich Khamroeva Shahlo Mirdjonovna Dauletov Adilbek Yusupbayevich Matyakubova Noila Shakirjanovna	60 - 63
	1888	Semantic and Grammatical Issues in Translating Idioms with Automatic Translation Systems	Manzura Abjalova Sarvinoz Sharipova	64 - 69
	1889	Improving Methodology for Selecting Fiction Works for Grades 5-9	Khabibulla Madatov Sapura Sattarova	70 - 73
	1897	Innovating SQL Automation: Evaluating Open-Source Large Language Models with a Dual-Stage Approach for Corporate Data Solutions	Erhan Arslan Eugen Harinda	74 - 79
	1898	Development of a Method for Automatic Extraction of Ontology Entity Names from Natural Language Texts	Sadirmekova Zhanna Elmira Daiyrbayeva Karbozova Indira Bekbolatov Samat	80 - 85
	1899	UZBEKCORPORA.UZ: Creation of Author Corpora on the Platform	Karshiev Abduvali Berkinovich Karimov Suyun Amirovich Tursunov Mukhammadsolikh Sadin ugli Kudratov Iskandar Makhmidov Shirinboy B otirovich	86 - 90
	1901	A Technique for Automatic Extraction of Basis Words: a Case Study on “Uzbek Primary School Corpus”	Khabibulla Madatov	91 - 94

		Shukurla Bekchanov Surayyo Khajibaeva	
1908	Özbek Dili Metinlerindeki Eşgönderge Çözümlemesi Algoritması Algorithm of Coreference Resolution in Uzbek Texts	Elov Botir Boltayevich Abdisalomova Şahlo Abdimurod kızı Karimova Xurriyat Şaripovna	95 - 100
1909	The Process of Lemmatization and Stemming in the Automatic Morphological Analysis of Uzbek Texts	Manzura Abjalova Eşref Adalı Munojot Adilova	101 - 106
1913	Turkish Question - Answer Dataset Evaluated with Deep Learning	Kadir Tutar Olçay Taner Yıldız	107 - 111
1914	Exploring the Semantic Complexity of Adjective-noun Collocations Between Uzbek and English for Improved Machine Translation	Nilufar Abdurakhmonova Nargiza Shamieva Eşref Adalı	112 - 115
1915	Linguistic Support and Algorithm of Phrase Alignment in Aligner Tool	Xoshimovna Shohida Shahabitdinova Matyakubova Noila Shakirjanovna	116 - 120
1946	Evaluating the Performance of PEFT and LoRA Approaches in Transformer-based Architecture for Handwritten Character Recognition	Pinar Savci Bihter Das Resul Das	121 - 126
1947	Evaluating the Performance of Turkish Automatic Speech Recognition Using the Generative AI-based Whisper Model	Tunahan Gokcimen Bihter Das Resul Das	127 - 131
1961	Özbek Dilinde Kelimelerin Kök ve Köklerini Ayırma Algoritmaları Algorithms for Parsing Roots and Stems of Words in Uzbek Language	Elov Botir Boltayevich Xusainova Zilola Yuldashevna Umirova Svetlana Mamurjonovna Normamatov Sultonbek A.Şahlo Abdimurod kızı Mahmadiev Shavkatjon	132 - 136
1970	Özbekçe Deyimlerin Dilsel Modellemesinin DDİ Açısından Önemi The Importance of Linguistic Modeling of Uzbek Idioms in NLP	Gülyamova Shahnoza Kahramonovna Nurboyeva Maftuna Vahobcon kızı	137 - 140
1981	IT Service Desk Ticket Classification via Large Language Models	Ezgi Paket Göksu Şenerkek Fatma Betül Akyol Furkan Salman	141 - 146
1998	Enhancing the Quality of Clustering Job Skills Through the Fine-tuning of the Sentence Transformer Model	V. S. Ramazanova A. S. Yerimbetova M. A. Sambetbaeva Zh. B. Sadirmekova S. K. Serikbayeva	147 - 152
2004	Named Entity Recognition from Kazakh Speech	Bauyrzhan Kairatuly Madina Mansurova	153 -156
2005	Sentiment Analysis of Reviews for E-Commerce Applications	Elif Hanife Aydoğan Feyza Yıldırım Okay	157 - 162
2011	LLM and RAG-Based Question Answering Assistant for Enterprise Knowledge Management	Gürkan Şahin Karya Varol Burcu Kuleli Pak	163 - 168
2018	Named Entities Recognition in Kazakh Text by SpaCy NER Models	Nurzhan Mukazhanov Aigerim Yerimbetova Mussa Turdalyuly Bakzhan Sakenov	169 - 174
2022	Efficient Unsupervised Domain Adaptation with	M. Rawhani D. Karaboğa U. Nalbantoğlu A. Baştürk B. Akay	175 - 180
2032	Aligning Sentences for Kazakh-Turkish Parallel Corpora	Diana Rakhimova Eşref Adalı Aidana Karibayeva	181 - 186
2048	Automated-Computer Based Assessment of Free-Text Exam Answers By Transformers	Burak Keskin Melih Günay	187 - 192

	2073	Knowledge-Augmented Large Language Model	Başak Buluz Kömeçoğlu Burcu Yılmaz	193 - 198
	2092	LLMs for Document-level Text Simplification in Turkish Foreign Language Learning	Fatih Bektaş Kutay Arda Dinç Gülşen Eryiğit	199 - 203
	2105	Mining Software Requirements From Turkish Texts:Techniques and Challenges	Serhat Uzunbayır Senem Kumova Metin	204 - 209
	2108	Using LLMs for Annotation and ML Methods for Comparative Analysis of Large-Scale Turkish Sentiment Datasets	Ercan Ezin Rukiye Savran Kiziltepe Murat Karakus	210 - 215
	2122	Sentiment Analysis for Hotel Reviews in Turkish by using LLMs	Ata Onur Özdemir Efe Batur Giritli Yekta Said Can	216 - 220
	2123	Semantic Knowledge Base for the Emotional Coloring Analysis of Kazakh Texts	Banu Yergesh Dinara Kabdylova Tilekbergen Mukhamet	221 - 224
	2140	Adaptive Batch Budget for LLM Inference	Cağrı Yeşil Berhan Turku Ay Funda Ay Ak Öykü Berfin Mercan Oğuzhan Nefesoğlu	225 - 229
	2154	Open Data Processing for Analysis of Behavior of Users in Digital Environment	Nikolai Prokopyev Pavel Ustin Fail Gafarov	230 - 232
	2164	Evaluating Turkish BERT-based Language Models for Effective Customer Feedback Interpretation in CRM	Can İşcan Muhammet Furkan Özara Ahmet Erkan Çelik Akhan Akbulut	233 - 238
	2175	Does Prompt Engineering Help Turkish Named Entity Recognition?	Arda Serdar Pektezol Ahmet Batuhan Ulugergerli Volkan Öztoklu Seniz Demir	239 - 243
	2188	Araneum Uzbekicum: A Gigaword Web-Crawled Uzbek Corpus	Vladimi-r Benko Radovan Garabik Shahlo Khamroyeva	244 - 2149
	2189	Automatic Topic Detection in Large Text Data in Uzbek using Clustering Methods	Umirova Svetlana Kholmuhamedov Bakhtiyor Karimov Suyun Narzieva Mamura	250 - 255
	2193	Machine Learning-Based Synonymous Word	Diana Rakhimova Madina Mansurova Nurakhmet Matanov Amira Yerik	256 - 260
	2194	Enhancing Text-to-SQL Conversion in Turkish: An Analysis of LLMs with Schema Context	Ferhat D emirkıran Ali Kemal Coşkun Yavuz Kömeçoğlu Başak Buluz Kömeçoğlu Ramazan Güven	261 - 265
	2203	Linguistic Knowledge Graph "Turklang" as Universal Model for Linguistic Resources and Tools in Turkic Languages	Ayrat Gatiatullin Nikolai Prokopyev Lenara Kubedinova Nilufar Abdurakhmonova Rustam Burnashev	266 - 270
	2216	Requirements for the Development of a Website Builder with Adaptive Design	Gulmira Bekmanova Banu Yergesh Assel Omarbekova Laura Orynbay Aiganym Bessembayeva Dinara Kabdylova Altanbek Zulkhazhav Beibarys Sultan	271 - 276
AI	1870	A Modified Marine Predators Algorithm for Numerical Function Optimization	Resul Özdemir Murat Taşyürek	277 - 281

		Veysel Aslantaş	
1884	Document Classification and Key Information Extraction Using Multimodal Transformers	Mehmet Selman Baysan	282 - 287
		Furkan Kızılay Ayşe İrem Özmen Gökhan İnce	
1926	Employee Turnover Prediction on Synthetic and Real Datasets	Azhar Murzaeva Volkan İllik Kadir Yunus Koc	288 - 292
1937	Data Augmentation in Remote Sensing Image Change Captioning	Orkhan Karimli İlyas Mustafazade Ali Can Karaca Fatih Amasyalı	293 - 298
1968	Comparative Evaluation of Word2Vec and Node2Vec for Frequently Bought Together Recommendations in E-commerce	Mustafa Keskin Enis Teper Alya Kurt	299 - 303
1971	Disrupting the Retrieval Phase in RAG-Based LLM Chatbots through Input Manipulation	Felix Pitterling Georgii Koshelev Oliver Haddad Rodrigo Teran	304 - 308
1976	Mutation Testing Reinvented: How Artificial Intelligence Complements Classic Methods	Serhat Uzunbayir Kaan Kurtel	309 - 314
1997	Prompting Large Language Models for Aerial Navigation	Emirhan Balcı Mehmet Sarıgül Barış Ata	315 - 320
2006	Açıklanabilir Yapay Zeka Üzerine Bir İnceleme A Review of Explainable Artificial Intelligence	Samed Al Şeref Sağıroğlu	321 - 326
2020	Investigating the Effects of Pre-trained Deep Learning Models and Fusion Techniques on Fruit Segmentation Performance	Esmâ İbiş Aybars Uğur	327 - 332
2034	Beyin Tümörü Ameliyatlarında Beyin Kayması Probleminin Telifisi: Bilgisayar Destekli Yöntemler Üzerine Bir Derleme Compensating for the Brain Shift Problem in Brain Tumor Surgeries: A Review of Computer-Assisted Methods	Ayşe Gül Eker Meltem Kurt Pehlivanoğlu Nur Banu Albayrak Nevcihan Duru Tolga Turan Dünder	333 - 338
2039	AI-Enhanced Endometrial Cancer Diagnosis System	Raziye Aslıhan Kürkcü Işın Yeşim Yeşilkaya Baylan Erkut Attar Burcu Selçuk Tacha Serif	339 - 343
2040	El Titreme Sinyalinden Transformer Temelli Parkinson Hastalığı Sınıflandırması Transformer Based Parkinson's Disease Classification from Hand Tremor Signal	Murat Atçeken Lütfü Hanoğlu Mehmet Ersin Bitirgen Bahadır K. Güntürk İbrahim Özşeker	344 - 347
2042	Üretken Yapay Zeka Fırsatlar ve Tehditler: Bibliyometrik Analiz Generative Artificial Intelligence Opportunities and Threats: Bibliometric Analysis	Betül Ersöz Şeref Sağıroğlu Halil İbrahim Bülbül	348 - 353
2053	Users Acceptance of Generative Artificial Intelligence Based on ChatBot Use	Ayşe Yeşim Mutlu	354 - 359
2054	MMBAttn: Max-Mean and Bit-wise Attention for CTR Prediction	Hasan Saribas Cagri Yesil Serdarcan Dilbaz Halit Orenbas	360 - 365
2065	Türkçe Otomatik Konuşma Tanıma Sistemleri İçin Sentetik Veri Üretme Yöntemi Synthetic Data Generation Method for Turkish Automatic Speech Recognition Systems	Hilal Tekgöz Harun Uz Muhammed Murat Özbek Tolga Büyüktanır	366 - 370
2066	A Federated Learning Framework for Classifying the Images in Ultrasonic Nondestructive Testing	Abdulkadir Gulsen Hilal Hacilar	371 - 375

			Burak Kolukisa Burcu Bakir-Gungor	
	2071	AI Assisted Customer Review Sentiment Analysis and Department Classification Tool	Burcu Seçuk Berat Ilgaz Dursun Tacha Serif	376 - 381
	2075	Histopatolojik Görüntülerde Doğru Mitoz Tespiti için Geliştirilmiş Renk Normalleştirme Yöntemi Enhanced Stain Normalization Method for Accurate Mitosis Detection in Histopathological Images	Refik Samet Nooshin Nemati Emrah Hançer Serpil Sak Bilge Ayça Kırmızı	382 - 387
	2110	ATGRUVAE: Reducing Noise and Improving Forecasting Performance in Stock Data	Hüseyin Akkas Burak Kolukisa Burcu Bakir-Gungor	388 - 392
	2113	Evaluating the Impact of Sentiment Analysis on Deep Reinforcement Learning-Based Trading Strategies	Mustafa Etcil Burak Kolukisa Burcu Bakir-Gungor	393 - 398
	2118	PsychSynth: Advancing Mental Health AI Through Synthetic Data Generation and Curriculum Training	Vedanta S P Madhav Rao	399 - 404
	2121	Covid-19 Bilgisayarlı Tomografi Görüntülerinin Segmentasyonu için Topluluk Öğrenmesiyle Birleştirilmiş U-Net Modeli U-Net Model Combined with Ensemble Learning for Segmentation of Covid-19 Computed Tomography Images	Furkan Atlan İhsan Pençe	405 - 410
	2129	Turkish Sign Language Video Generation from Pose Sequences Using a Conditional GAN Model	Feyza Özkan Hatice Kübra Tekin Hacer Yalim Keles	411 - 416
	2131	Statistical Attention Layer for Neural Network Training	Ergun Biçici Hasan Saribaş	417 - 420
	2134	Dudak Şekillerinden Kişilik Analizi: Marifetname ve Açıklanabilir Yapay Zeka Yaklaşımı Personality analysis from lip shapes: Marifetnâme and explainable artificial intelligence approach	Semra Çelebi İbrahim Türkoğlu	421 - 426
	2148	Breast Cancer Detection Using Deep Learning Models	Erkan Akkaş Mustafa Yapar Şeref Sağıroğlu Ali Öter Betül Ersöz	427 - 430
	2191	CGAN Mimarisi ile Kısıtlı Veri Ortamında Kestirimci Bakım Performansının İyileştirilmesi Improving Predictive Maintenance Performance in Limited Data Environment with CGAN	Mehmet Musa Özcan Uğurhan Kutbay	433 - 438
	2207	Integrating the Focusing Neuron Model with N-BEATS and N-HITS	Şuayb Talha Özçelik Faik Boray Tek	439 - 442
	2217	Advanced Convolutional Neural Networks for Plastic Classification in Recycling Systems	Nazym Alimbekova Ainur Zhumadillayeva Sunggat Aiymbay	443 - 447
ML	1846	Semi-Supervised Learning for Sensor-Based Flash Point Prediction in Oil Industry	Mert Sülük Şule Gündüz Öğüdücü	448 - 452
	1847	Robust Stacked Ensemble Model for Lung Cancer Diagnosis	Ayhan Akbas Gonca Buyrukoglu Selim Buyrukoglu	453 - 457
	1856	Kod Kusurlarının Tespitinde Makine Öğrenmesi Tekniklerinin Başarım Analizi The Performance Analysis of Machine Learning Techniques in Code Smell Detection	Arman Yavuz Oya Kalipsiz	458 - 463
	1860	Enhancing Financial Time-Series Analysis with TimeGAN: A Novel Approach	Cemal Öztürk	464 - 467
	1869	From Traditional to Deep: Evaluating Sentiment Analysis Models on a Large-Scale Tweet Dataset	Alisahib Mammadov Gokhan Bakal	468 - 473

1871	Comparison of Feature Selection Methods for Mechanical Properties of Cold Rolled Products in Flat Steel Manufacturing	Didem Bakiler Ilme Merve Öper E. Fatih Yetkin	474 - 478
1883	A Machine Learning Approach to Steel Sheet Production Surface Quality	Asena Öztürk Mehmet Nafiz Aydın	479 - 484
1938	NLP Tabanlı Özellik Çıkarımına Dayalı Makine Öğrenme Algoritmaları Kullanılarak SQL Enjeksiyonu Ataklarının Tespit Edilmesi Detection of SQL Injection Attacks Using Machine Learning Algorithms Based on NLP-Based Feature Extraction	Hakan Can Altunay	485 - 489
1940	Enhancing Driver Injury Severity Prediction Using Optimized Oversampling and Feature Selection Techniques	Vahide Nida Kılıç Gizen Mutlu Esra Saraç Çiğdem Acı Murat Özen	490 - 495
1972	Predicting Electric Vehicle Adoption in the EU: Analyzing Classification Performance and Influencing Attributes Across Countries, Gender, and Education Level	Mert Kumbasar Gül Tokdemir Thouraya Gherissi Labben Gurdal Ertek	496- 499
1977	Arabam.com Kurumsal Üyelerinin Satın Alma Davranışlarının Analizi	Dilan Oragaz İsmail Duru	500 - 505
1983	Makine Öğrenmesi ve Derin Öğrenme Modelleri Kullanılarak MR Görüntülerinden Demans Sınıflandırma	Meltem Kurt Pehlivanoğlu Onur Varol Osman Aldemir Ata Emir Uncu Nevcihan Duru	506 - 511
1995	Indoor Localization with GravNetConv and Dynamic Graphs	Mert Bayraktar Alper Ozcan Umit Deniz Ulusar	512 - 516
2023	GPS Spoofing Detection on Autonomous Vehicles with XGBoost	Emre İşleyen Şerif Bahtiyar	517 - 522
2025	SmartSniffer: Predicting Food Spoilage Time with an Electronic Nose-based Gas Monitoring Apparatus Utilizing a Two-Stage Pipeline Model	Pandey Shourya Prasad Sreyas Janamanchi Barath S Narayan Madhav Rao	523 - 528
2064	GNF: Generative Natural Faces Dataset for Face Expression Recognition Task	Cansu Özer Volkan Dağlı Mustafa Kağan Gürkan	529 - 533
2081	Incorporating Knowledge Graph Embeddings into Graph Neural Networks for Sequential Recommender Systems	Kazım Emre Yüksel Susan Üsküdarlı	534 - 539
2095	The Classification of Human and Cognitive Architecture Time Estimation Using Machine Learning Methods	Behiye Şahin Sonay Duman	540 - 543
2101	Optimization of Roadside Assistance Tow Truck Services Provided to Insured Individuals with Traffic and Comprehensive Insurance Policies	Serkan Kırca Fatma Yağmur Erbaş Sedat Cebesoy Buse Özkanat Aysun Yıldırım Ceren Yıldırım	544 - 549
2104	Optimizing Recommendation Systems By Fusion of KNN, Singular Value Decomposition, and XGBoost for Enhanced Performance	Mohammed Basim Mohammed Mohammed Erkut Arıcan	550 - 555
2119	Spoken Accent Detection in English using Audio-Based Transformer Models	Oguzhan Ozturk Hasan Kilimci H.Hakan Kilinc Zeynep Hilal Kilimci	556 - 561
2136	Analysis of Adversarial Training for Resilient Image Recognition Against Different Attacks	Emir Can Karakuş Fırat Kutluhan İslim Ece Gelal Soyak	562 - 567

	2150	Business Process Management Anomaly Detection through Semantic Embedding-Integrated Graph Neural Networks	Teoman Berkay Ayaz Ege Gülce Stanley Hsu Alper Özcan Akhan Akbulut	568 - 573
	2155	Multi-Aspect Anomaly Detection with Graph Neural Networks and Kolmogorov-Arnold Networks in Business Process Management	Teoman Berkay Ayaz Ege Gülce Stanley Hsu Alper Özcan Akhan Akbulut	574 - 579
	2156	Comparison of a Deep Learning and a Hybrid Model for Classification of an Unbalanced Urgent Cases Dataset for Human Faces	Faruk Özgür Neslihan Arıkan Özge Öztimur Karadağ	580 - 585
	2171	Estimating the Manufacturing Cost of a Metal Part from Textual and Geometric Features	Talha Rehman Abid Mert Daloğlu Cem Yıldız Ali Erman Erten Kamer Kaya	586 - 591
	2176	Object Detection in Hyperspectral Images with Unsupervised Domain Adaptation	Sinem Aybüke Şakacı Alp Ertürk Erchan Aptoula	592 - 596
	2182	Machine Learning Approaches to Predict Thyroid Cancer Recurrence: A Comparative Study	Candide Ozturk Ozgur Sagir Ulas Vural	597 - 602
	2197	Yangın Söndürme Süreçlerinde Su Tüketiminin Makine Öğrenmesi ile Tahmini Prediction of Water Consumption in Fire Extinguishing Processes Using Machine Learning Approaches	Emin Ölmez Ahsen Usta Orhan Akbulut	603 - 606
	2202	Synthetic Vibration Data Generation and Fault Classification in CNC Machines Using Transformer GANs and ConvLSTM Networks	Özlem Erbay Batrav Erbay	607 - 612
IoT	1862	Design and Implementation of a Management System for Wireless Electronic Combination Locks	Batuhan Kol Metin Bilgin	613 - 618
	1887	Solar IoT: Monitoring the Orientation and Electrical Parameters of the Solar Panel	Hakan Dalkılıç Oğuz Gora	619 - 624
	1973	Multifunctional Smart Spoon for Parkinson's: Stability Enhancement and Diagnostic Tools	Divyansh Singhal Sasi Snigdha Yadavalli Nupur Patil Siddharth Chauhan Madhav Rao	625 - 629
	1988	An AI-Assisted Autonomous IoT Agent for Smart Spaces	Yakup Kayataş Sanem Kabadayı	630 - 635
	1991	Advanced Detection and Prevention of Sinkhole Attacks in 6TiSCH Networks	Burak Aydın Hakan Aydın Sedat Görmüş	636 - 641
	2000	Comparison of Different Weather Data Acquisition Methods	Emre Evcin Yusuf Murat Erten	642 - 647
	2057	Employing Digital Twin to Forest Fire Management Systems	Bugra Aydın Sema Fatma Oktug	648 - 653
	2085	Distributed Key Value Store for IoT Edge Devices	Burak Aslantaş Elif Nurdan Pektaş Şebnem Baydere	654 - 659
EMB	2096	Soft Error Reliability Assessment of TinyML Algorithms on STM32 Microcontroller	Ahmet Selim Karakuş Osman Buğra Gökteş Sadık Akgedik Sanem Arslan	660 - 664
HUM	1999	Development of An Algorithm for Converting Json Formats to Xml by Forming its File Data Structure	Aigul Mukhitova Aigerim Yerimbetova Vladimir Barakhnin	665 - 670

			Elmira Daiyrbayeva	
	2130	Facial Emotion Recognition for Imitation in Human-Robot Interaction	İbrahim Yanç Aykan İpek Selma Yılmazyıldız Kayaarma	671 - 676
HPER	2030	A Glimpse to Scalable LLM Architectures: Building Real-Time Sentiment Analyser with Kafka and FastAPI	Uzay Çetin Yunus Emre Gündoğmuş	677 - 681
	2165	Parallelization of BitColor Algorithm via Multithreading and GPU for Graph Coloring	Burak Kocausta Gizem Sungu Terci Alp Arslan Bayrakci	682 - 687
BCHN	1922	Security Dynamics of Blockchain-Enabled SDN Systems: A Taxonomic Approach	Deniz Dudukcu Murat Karakus	688 - 693
	2056	Comparative Performance Analysis of Ethereum and Optimism Smart Contracts in Health Insurance	Beyhan Adanur Dedetürk Bilge Kagan Dedetürk	694 - 699
BIO	1907	Disease Prediction From Human Microbiome by Utilizing Machine Learning	Bahadır Emin Temel Bora Kocapinar Zerrin Isik	700 - 705
	1923	Medikal Görüntülerin Etkili Bir Şekilde Sınıflandırılması için Dikkat Tabanlı Temsil Öğrenimi	Selim Arslan	706 - 711
		Attention Based Representation Learning for Effective Classification of Medical Images	Kemal Polat	
	1933	Utilizing Tree-Based Algorithms for Genetic Variant Interpretation	Rumeysa Aslıhan Ertürk Mehmet Baysan	712 - 717
	1978	A Test Bench for Replicating Human Breathing: Evaluating Thermal Effects of N95 Filtering Facepiece Respirator Leaks ' Preliminary Findings	Geoffrey Marchais Barthelemy Topilko Mohamed Arbane Jean Brousseau Clothilde Brochot Yacine Yaddaden Ali Bahloul Xavier Maldague	718 - 723
	1979	Development of Multiphysics Models for the Study of Airflow and Thermal Effects During the Use of Filtering Facepiece Respirators	Barthelemy Topilko Geoffrey Marchais Mohamed Arbane Jean Brousseau Ali Bahloul Xavier Maldague Clothilde Brochot Yacine Yaddaden	724 - 730
	1994	Awareness of Gamification as a Non-Pharmacological Intervention in Sleep Health Research: A Systematic Literature Review	Arife Gülah Erol Murat Yılmaz Paul M. Clarke	731 - 736
	2003	Optik Çukur Bölütlemesi Segmentation of the Optic Cup	Saadet Aytaç Arpacı Songül Varlı	737 - 741
	2090	Clinically Significant Prostate Cancer Detection and Diagnosis in Bi-parametric MRI with Deep Learning Models	Clinton Binda Asoh-Itambi Mecit Yüzkat Songül Varlı	742 - 744
	1993	Malaria Incidence Prediction Using Climate Factors with Machine Learning Models	Ayoade Adeyemi Cyrille Mesue Njume Goodnews Akindele Nana Aisha Umar Ayodele James Oyejide	748 - 753
CDSec	1857	Dual-layered Approach for Malicious Domain Detection	Nadide Bilge Doğan Alp Barış, Beydemir Şerif Bahtiyar Umutcan Doğan	754 - 759
	1953	Analysis of the Zero-Day Detection of Metamorphic Malware	Sibel Gulmez Arzu Gorgulu Kakisim İbrahim Sogukpınar	760 - 765
	1960	White-Box Style Intrusion Detection System Integration into Industrial Metaverses	Yasir Kılıç	766 - 771

			Vahide Nida Kılıç Ali İnan	
2037	A Practical Investigation of Spear Phishing Spam Emails: Comparative Analysis and Evaluation	Kendrick Kurt Günter Bollens	772 - 777	
2091	Multipurpose Malware Detection System	Mert Gursimsir Cem Ayar Ibrahim Sogukpinar	778 - 782	
CRYP	1867	A New Method to Detect Malicious DNS over HTTPS via Feature Reduction	Ali K. Bozkurt Halil E. Aköz Ataberk Taşpınar Şerif Bahtiyar	783 - 788
	1939	Generative Adversarial Networks for Synthetic Jamming Attacks on UAVs	Burcu Sönmez Sarıkaya Şerif Bahtiyar	789 - 794
	1958	Detecting Corruptive Noise Rounds for Statistical Disclosure Attacks	Alperen Aksoy Doğan Kesdoğan	795 - 800
	1996	Future Directions of Cybersecurity in Industrial Internet of Things Through Edge Computing	Tamara Zhukabayeva Lazzat Zholshiyeva Nurdaulet Karabayev	801 - 806
	2061	Resource-Efficient Ensemble Learning for Edge IIoT Network Security against OSINT-based Attacks	Mert İlhan Ecevit Zakire Çukur Muhammed Ali İzgün Noor Ul Ain Hasan Dağ	807 - 812
	2074	Transfer Learning for Phishing Detection: Screenshot-Based Website Classification	Furkan Çolhak Mert İlhan Ecevit Hasan Dağ	813 - 818
	2145	Blok Şifrelerin Karıştırma ve Yayılım Tabakaları için Yeni Bir Analiz Aracı A New Analysis Tool for Confusion and Diffusion Layers of Block Ciphers	Mehmet Ali Demir Meltem Kurt Pehlivanoğlu Pınar Savaştürk Emir Öztürk Muharrem Tolga Sakallı Sedat Akleylek	819 - 824
CVIS	1851	Impact of Image Augmentation on Deep Learning-Based Classification of Granite Tiles	Gaye Ediboglu Bartos Sibel Ünalıcı Nesibe Yalçın	825 - 828
	1877	Advanced Facial Expression Classification with CNN-Transformer Integration for Human-Computer Interaction	Ali Azmoudeh Cigdem Altin Gumussoy Hazım Kemal Ekenel	829 - 834
	1936	Word Image Representation at Local and Global Levels Based on Vision Transformers	Baha Edine Harrath Mohamed Mhiri Mohamed Cheriet	835 - 840
	1949	Detecting Duplicate Products in E-Commerce Images Using Siamese Networks	Enis Teper Furkan Eseoğlu Mustafa Keskin	841- 846
	1963	Comparative Analysis of Visual Attribute Tagging Models for Upper-Body Clothing Products	Engin Kaya Mert Yanık	846 - 850
	1986	Development of A Model of Kazakh Sign Language Recognition Based on Deep Learning Method	Aigerim Yerimbetova Bakzhan Sakenov Ulmeken Berzhanova Nurzhan Mukazhanov Elmira Daiyrbayeva Mohamed Othman	851 - 856
	1989	Recognising Kazakh Sign Language with Mediapipe	Aigerim Yerimbetova Diana Kaidina Bakzhan Sakenov Elmira Daiyrbayeva Mussa Turdalyuly Ulmeken Berzhanova	857 - 862
	1990	Ultrason Görüntülerinden Meme Kanseri Teşhisi için Lezyon Tespitli Hibrit Derin Öğrenme Modelleri	Osman Doğuş Gülgün	863 - 868

		Hybrid Deep Learning Models with Lesion Detection for Breast Cancer Diagnosis from Ultrasound Images	Hamza Erol	869 - 874
1992		Olumsuz Hava Koşullarında Gemi Tespiti ve Sınıflandırılması Ship Detection and Classification in Adverse Weather Conditions	Yahya İzala Yaşar Becerikli	
2010		Removing Background from Noisy Handwritten Signatures on Banking Documents using GANs	Ege Dinçer Sacide Kalaycı Emre Yurdakul Bilge Köroğlu	875 - 879
2013		A Faster R-CNN Model for Multi-class Classification and Detection of Land, Air, and Sea Vehicles	Enes Güvelioğlu Çiğdem İnan Acı	880 - 885
2098		Çelik Hurdasının Sınıflandırılmasında ResNet ve Görüntü Dönüştürücü Tabanlı Modellerin Başarımı	Sefa Temur Levent Karacan	886 - 891
2117		Advanced Computer Vision Techniques for Reliable Gender Determination in Budgerigars (Melopsittacus undulatus)	Atalay Denknalbant Efe İlhan Cemalcılar Majid Ahangari Abdussamat Saidburkhan Alireza Zirak Ghazani Erkut Arıcan	892 - 897
2151		Teslimat Süresi Tahminlerinde Makine Öğrenmesi Modellerinin Yorumlanabilirliği Interpretability of Machine Learning Models in Delivery Time Predictions	Serhat Agit Satıcı Habil Kalkan	898 - 903
2169		Deep Learning based Order Form Recognition	Enes Alperen Buğaz Orhan Akbulut Aysun Taşyapı Çelebi Uğur Yıldız	904 - 908
2170		Learning Based Photo Management on Smartphones	Beyza Nur Şenay Orhan Akbulut Aysun Taşyapı Çelebi Uğur Yıldız	909 - 912
2177		Retinal Disease Classification Using Optical Coherence Tomography Angiography Images	Omer Faruk Aydın Muhammet Serdar Nazlı F. Boray Tek Yasemin Turkan	913 - 918
2178		Segmentation Based Classification of Retinal Diseases in OCT Images	Öykü Eren F. Boray Tek Yasemin Turkan	919 - 924
2183		Unsupervised Translation from Shortwave Infrared Images to RGB Images: A Comparative Evaluation	Duygu Tasbas Hacer Yalim Keles	925 - 930
DSCI	1882	Automatic Segmentation of Time Series Data with PELT Algorithm for Predictive Maintenance in the Flat Steel Industry	Saygın Kaçar Tuğçe Ballı E. Fatih Yetkin	931 - 936
	1921	Otomobil Kredilerinde Temerrüt Tahmini ve Araç Geri Kazanım Olasılığı Analizi - Bir Segmentasyon Çalışması Default Prediction and Vehicle Recovery Probability Analysis in Auto Loans - A Segmentation Study	Sahin Nicat Anıl Ferdi Kaya	937 - 942
	1955	E-Ticaret Sadakat Programı Müşteri Eğilim Tahmini Customer Propensity Prediction in E-Commerce Loyalty Program	Yunus Emre Gündoğmuş Sinan Keçeci Ege Erdem Emre Rençberoğlu	943 - 946
	1967	Yapay Zeka ve Makroekonomik Göstergeler ile Tüzel Kredilerin Değerlendirilmesi Evaluation of Corporate Loans with Artificial Intelligence and Macroeconomic Indicators	Burak Yüksel Hakkı Berkay Çiçek	947 - 951
	1974	Enhanced Bot Detection on TwiBot-20 Dataset	Mehmet Ali Osman Atik Şevket Umur Çakır Alper Özcan	952 - 956
	1975	Drug-Drug and Drug-Protein Link Prediction on DTINet dataset	Mehmet Ali Osman Atik Yusuf Çelik Alper Özcan	957 - 960
	2029	Perakende Verilerinde Anomali Tespiti ve Döviz Kuru İlişkisi Üzerine ChatGPT Destekli Yorumlama	Şadi Evren Şeker	961 - 966

		ChatGPT Supported Interpretation on Anomaly Detection in Retail Data and Exchange Rate Relationship	Hatice Nizam-Özoğur	
	2033	Text to SQL Transformation Using LLM: a Comparative Research of T5, Seq2Seq, and SQLNet Models	Zhazira Shaikhiyeva Madina Mansurova Gulshat Amirkhanova	967 - 972
	2076	Sağlık Sigortası Sahiplerinin Davranışsal Analizi ve Kümelenmesi Clustering and Behavioral Analysis of Health Insurance Owners	Omer Sezer Koyuncu Seçil Arslan	973 - 978
	2087	On symbolic Prediction of Time Series for Predictive Maintenance Based on SAX-LSTM	Aykut Güler Tuğçe Ballı E. Fatih Yetkin	979 - 983
	2135	Profiling Driver Behaviors Using AI-Based Methods and Deep Learning Techniques for Improving Road Safety: A Comparative Study of Algorithms	Volkan Oban Mustafa Kaya Güzide Safi İrem Nur Çimen Tubanur Çatak Bulut Karadağ Gökhan Gümüş Aslıhan Çandır Fatih Alagöz	984 - 989
IR	1896	ReRag: A New Architecture for Reducing the Hallucination by Retrieval-Augmented Generation	Robin Koç Mustafa Kağan Gürkan Fatoş T. Yarman Vural	990 - 994
	1941	Enhancing Object Detection in Aerial Images Using Transformer-Based Super-Resolution	Aslan Ahmet Haykır İlkay Öksüz	995 - 1000
NET	1985	Proof of Concept Implementation for RSVP TSN Control Plane	Necip Gozuacik	1001 - 1004
	2100	Integrating Blockchain and SDN for Centrality-Aware Virtual Multicast Tree Embedding	Furkan Ayaz Evrin Guler Murat Karakus Davut Hanbay	1005 - 1010
	1969	QoS Aware Routing Approaches in Software Defined Smart Grids	Sedef Demirci	1011 - 1016
	2008	Deep Reinforcement Learning Routing in Mobile Networks	Arif Burak Dikmen Hasari Çelebi	1017 - 1022
RBOT	1942	Endüstriyel Robotik Sistemlerin Güvenlik Doğrulaması Safety Verification of Industrial Robotic Systems	Fatih Furkan Arslan Metin Özkan	1023 - 1028
	2077	EKF Based Localization: Integrating IMU and LiDAR Data in the Hilti SLAM Challenge	Behice Bakır Havvanur Bozömeroğlu Ebu Yusuf Güven	1029 - 1034
SING	1965	Communication (Educational) Kit (HaKi)	Murat Sever Utku Bilgin	1035 - 1038
	2089	Manyetik Parçacık Görüntülemesinde Sistem Matrisi için Farklı Dalgacık Dönüşümlerinin Seyreklik Seviyesi Karşılaştırması Sparsity Level Comparison of Different Wavelet Transforms for the System Matrix in Magnetic Particle Imaging	Vildan Atalay Aydın	1039 - 1043
	2097	Sparse Channel Estimation For M-QAM-Based Underwater Acoustic Communication Systems	Mhd Tahssin Altabbaa Berkay Tekat Emin Tarik Iseri	1044 - 1048
OTH	1858	The 80/20 Principle in Morphemics-Morphology in the Educational Corpus of the Uzbek Language	Shahlo Khamroeva Bakhtiyor Mengliyev Muyassar Kholova	1049 - 1052
	1904	Gamification as a Tool for Personalized Learning in Inclusive Education	Dilaram Baumuratova Tamara Zhukabayeva Mira Rakhimzhanova	1053 - 1058
	1918	A Metaheuristic Algorithm for the Fixed Charge Transportation Problem	Nermin Kartli	1059 - 1062
	2027	Eğitimde Sürükleyici Teknolojilerin Kullanılması Fırsatlar ve Beklentiler	Atamuratov Rasuljon Kadirjanovich Majidova Gulhayo Abdirazzoq qızı Bayjonov Furqat Baxramovich Ongarov Mansurbek Bayrambekovich	1063 - 1068

			Saydullayev Zafar Erkinovich	
	2103	Bilgisayar Mühendisliği Öğrencilerinin Perspektifinden Bilişim Hukukunun Güncel Sorunları ve Çözüm Önerileri Current Challenges and Solution Proposals in IT Law from the Perspective of Computer Engineering Students	Sevda Bora Çınar	1069 - 1075
	2200	A Comparison of shcU-Net Based GAN and U-net Based GAN in Adult Dental Segmentation	Gürdal Altundağ Hakan Öcal	1075 - 1080
	1932	Leveraging Quantum Computing and Optimization to Estimate Financial Crashes in Small and Medium-Sized Enterprises	Ege Dincer Berkay Coskuner Ege Bilaloglu Bilge Koroglu	1081 - 1086
SW	1859	Investigating The Adoption of International Software Quality Standards in Turkey: A Comprehensive Analysis	Sevgi Koyuncu Tunç	1087 - 1093
	1886	Development of the Functional Structure of the Science and Education Information System	Dauletov Adilbek Yusupbayevich Matyakubova Noila Shakirjanovna	1094 - 1098
	1892	React ve Preact Javascript Çerçevesinde Karşılaştırmalı Analiz Comparative Analysis on React and Preact Javascript Frameworks	Muhammed Furkan Uygur Nesibe Yalçın	1099 - 1104
	1917	CAGE: A Tool for Code Assessment and Grading	Ümit Kanoğlu Oğuz Kerem Yıldız Hasan Sözer Olca Taner Yıldız	1115 - 1110
	1957	Extracting Driving Styles from Automotive Sensor Data to Develop Personas	M. Cagri Kaya Tayssir Bouraffa Krzysztof Wnuk	1111 - 1114
	1962	Lojistik Sipariş Dağıtım Entegrasyonu Sürecinde Sipariş Geri Çağırma Süreci Tasarımı ve Yazılım Geliştirme Design and Software Development of The Order Recall Progress in The Logistics Order Distribution Integration Process	İklim Barman Ersin Şengül	1115 - 1120
	2009	The Dimension of Green Coding in Software Quality Control Processes	Volkan Abur	1121 - 1126
	2055	Are We Asking the Right Questions to ChatGPT for Learning Software Design Patterns?	Çağdaş Evren Gerede	1127 - 1132
	2060	Optimizing LLVM IR: Transforming Multiplication to Addition for Enhanced Execution Efficiency	Huseyin Karacalı Efecan Cebel Nevzat Donum	1133 - 1138
	2080	Estimation of Software Integration Test Duration via UML Statecharts	Fehim Göler Tolga Ovatman	1139 - 1144
	2093	DIA4M: A Tool to Streamline DevOps Processes of Distributed Cloud-Native Systems	Eren Tarak H. Hakan Kilinc	1145 - 1150
	2111	Software Industry Perception of Academic Collaboration	Deniz Akdur	1151 - 1156
	2139	Görüntü İşlemeyle Doğrulamalı Robotik Test Otomasyon Kullanımı: POS Cihazları Üzerine Uygulama	Miraç Emektar Harun Kadioğlu Ahmet Efendioğlu Fatih Mehmet Harmancı	1157 - 1161
	2141	VoIP Sistemlerinde Zihin Haritası Tabanlı Test Stratejiler : SIP Pbx Ürünü Üzerine Bir İnceleme Mind Map-Based Testing Strategies in VoIP Systems: A Case Study on SIP Pbx Products	Miraç Emektar Furkan Günaydın Fatih Mehmet Harmancı	1162 - 1167
	2173	A Robust Microservices Framework for Indoor Tracking System Development	Gafur Hayyrbayev Kerem Küçük Mahmut Çavur	1168 - 1172
DM	1927	Unsupervised Pattern Extraction of Time Series Data for Energy Disaggregation	Şirin Azazi Deveci Melih Günay	1173 - 1178
	1944	Topic Modeling Enhanced Tripartite Graph for Recommendation using Metapaths	Yaren Yılmaz Irem İşlek Şule Gündüz Öğüdücü	1179 - 1184
	1948	Community Detection on Software Library Dependency Graphs using Graph Neural Networks	Şevket Umut Çakır	1185 - 1190

			Mehmet Ali Osman Atik Ümit Deniz Uluşar	
	2190	Enhancing Mesh and Point Cloud Similarity Detection through Geometric Features and ICP	Talha Rehman Abid Mehtap Öklü Cem Yıldız Ali Erman Erten Kamer Kaya	1191 - 1196
	2214	Comparative Analysis and Practical Implementation of Machine Learning Algorithms for Phishing Website Detection	Samad Najjar-Ghabel Shamim Yousefi Payam Habibi	1197 - 1202
	2215	A Technical Analysis and Practical Implementation of Machine Learning Algorithms for Predicting Survival in Breast Cancer Patients	Shamim Yousefi Samad Najjar-Ghabel Hamidreza Shafaei	1203 - 1208
BIG	1881	Comparison Between Time Series and Relational Databases	Alpar Türkoğlu Onurcan Ersen İbrahim Onuralp Yiğit Dincer Unal Hatice Golcuk	1209 - 1212
	1930	A Performance Evaluation Study on a Data Analytics Platform for Emergency Calls	Engin Yakar H. Hakan Kilinc	1213 - 1218
	2079	Adaptive Composite Market Volatility Index (CMVI) for Enhanced Stock Price Forecasting	Rabia Çevik Uğur Barış Özyürek Ali Kanal Vael Kokach Büşra Kocaçınar Oznur Şengel Fatma Patlar Akbulut	1219 - 1223
	2142	Hybrid Deep Learning Framework for Stock Price Prediction Incorporating Technical and Macroeconomic Indicators	Ali Can Turan Vael Kokach Büşra Kocaçınar Oznur Şengel Fatma Patlar Akbulut	1224 - 1228
	2125	Emotion-Aware Multimodal Biometric Identification by using Biosignals	Yekta Said Can Beyzanur Bektan Fatih Alagöz	1229 - 1235
	1854	Özbekçe-Türkçe Otomatik Çeviri Yazılımı için Deyimlerin Veritabanını Teşkil Etmede Karşılaşılan Güçlükler Automatic Translation Software Difficulties in Organizing the Database of Idioms for Uzbek and Turkish	Manzura Abjalova Umida Raşidova Eşref Adalı	1236 - 1240
	2028	Reversible Steganographic System for the Transmission of Personal Medical Data	Elmira Dalırbayeva Ekaterina Merzlyakova Aigerim Yerimbetova Aigul Mukhitova	1241 - 1246

The 80/20 Principle in Morphemics-Morphology in the Educational Corpus of the Uzbek Language

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Abstract— Huge range of principles can be applied in various disciplines. To illustrate, the paradigm concept has been extended from the scientific sciences to the structural linguistics. The Pareto principle of economic sphere may also be used to language theory in order to distinguish qualitative and quantitative features within language layers. Pareto principle states that 20 percent of an effort produces 80 percent of the output, and 20 percent of an effort is efficient for 80 percent of the results. The study investigates how the Pareto principle is mirrored in the Uzbek language's morphologic and morphemic structures. It also demonstrates that the 80/20 concept may be applied to lexical categorization and word creation research. The word form suffixes had been carefully analyzed while speech context and word usage frequency observations were conducted utilizing the Uzbek educational corpus. It has been established that the most essential form suffixes influence 80 percent of morphologic structures as well as language vocabulary. **Keywords**—component, formatting, style, styling, insert

Keywords: *Uzbek educational corpus, morphemic, morphology, formative suffixes, pareto principle*

I. INTRODUCTION

Uzbekistan, a nation with diverse cultural backgrounds, officially designates the Uzbek language as its sole state language [1]. A.Pulatov, M.Ayimbetov, S.Mukhammedova, S.Karimov, A.Babanarov, D.Urinbayeva, N.Abdurakhmanova [2], A.Norov on computer linguistics Khamroyeva's thesis on "Linguistic bases of formation of the author's corpus of the corpus of the Uzbek language", A.Eshmuminov's "The corpus of the Uzbek national language Synonym base" is one of the practical steps in computer linguistic [3]. We are to achieve this goal, we need to design elaborate tagset, which will encompass all linguistics properties of written and spoken texts with a proper focus on sounds, segments, characters, words, morphemes, compounds, collocations, multiword units, phrases, sentences, idioms, proverbs, and others linguistic properties [4]. To document this language and to determine how it is used in

academic texts, a corpus database needs to be collected together with a corpus platform to explore the corpus [5].

Grammar is description of the sentence construction methods of a particular language; a mathematical system that defines language. While describing grammar, we show the rules for emergence of a chain of characters belonging to that language. This is why grammar can be called a language chain generator [6]. Linguistic modeling of polysemous morpheme and words for a semantic analyzer lays the foundation for the development of their mathematical algorithms and the creation of a semantic analyzer in the future [7]. In this study, we will consider the reflection of morphemic units in the educational corpus of the Uzbek language and the influence of its volume and analysis on the theoretical views that have developed in practice so far.

II. METHODS

This article presents theoretical solutions in the Uzbek educational corpus of the Uzbek language using automatic analysis and statistical approach to express the position of the 80/20 Pareto rule in such morphotypes as nouns, adjectives, numbers, and verbs in the morphological structure of Uzbek linguistics

III. RESULT

Morphemic polysemy is widespread within morphemic elements. This relates to the morpheme's polyfunctionality. As an example, consider the suffix -chilik. Textbooks identify three meanings for this suffix:

1. A noun indicating a field that produces what is understood from the bottom up: paxtachilik, urug'chilik, chorchachilik, uzumchilik (cotton growing, seed growing, cattle breeding, viticulture.)
2. A noun describing the state of a phenomenon or a thing: pishiqchilik, mo'lichilik, arzonchilik (abundance, prosperity, cheapness.)

3. A term indicating an action related with a fundamental principle: ulfatchilik, tirikchilik, dushmanchilik (friendship, livelihood, enmity) [8].

Polysemous morphemes do not have the same number or proportion of meanings as the words they are composed of. If any within the above meanings are extensively and actively employed, the pattern of word production becomes less fruitful. We shall check the frequency of use of some of the listed examples in the Uzbek language corpus.

TABLE I. THE FREQUENCY WITH WHICH THE MEANINGS OF THE POLYSEMIC MORPHEME -CHILIK ARE USED IN THE UZBEK EDUCATIONAL CORPUS

No	Word	Search results	A link to the search result in the corpus
1	<i>paxtachilik</i>	1236	https://uzschoolcorpara.uz/uz/Search?c=1&q=paxtachilik
2	<i>urug'chilik</i>	1841	https://uzschoolcorpara.uz/uz/Search?c=1&q=urug%27chilik
3	<i>chorvachilik</i>	7143	https://uzschoolcorpara.uz/uz/Search?c=1&q=chorvachilik
4	<i>arzonchilik</i>	32	https://uzschoolcorpara.uz/uz/Search?c=1&q=arzonchilik
5	<i>pishiqchilik</i>	128	https://uzschoolcorpara.uz/uz/Search?c=1&q=pishiqchilik
6	<i>tirikchilik</i>	1305	https://uzschoolcorpara.uz/uz/Search?c=1&q=tirikchilik
7	<i>ulfatchilik</i>	85	https://uzschoolcorpara.uz/uz/Search?c=1&q=ulfatchilik
8	<i>dushmanchilik</i>	11	https://uzschoolcorpara.uz/uz/Search?c=1&q=dushmanchilik

As shown in the Table I, the suffix -chilik "the noun representing the field that grows what is understood from the base" is widely employed in speech (cotton farming 1236 times, seed farming 1841 times, and cow breeding 7143 times). The usage meaning "noun denoting the work related to the concept understood from the base" is quite uncommon. This meaning-making pattern appears infrequently: patriotism 85 times and enmity 11 times. If we use the average arithmetic approach to compute the total number of productive and unproductive types of formation, we can estimate the probability of polysemous compound word formation as 80/20. "The task of morphological analysis is to automatically determine which category each word in the text belongs to; is to determine which lexical-grammatical class the words belong to [6].

Hojiev's claims that notion of "the majority of morphemes are polysemic in nature" is not supported by Uzbek language materials. To back up his claim, he provides examples of morphemes that generate personal nouns. "In the modern Uzbek language, the morphemes -chi, -shunos, -kor, -soz, -furush and -xo'r produce personal nouns, which all mean "person": dutorchi (dutar player), huquqshunos (lawyer), tadbirkor (businessman), yo'lsoz (road constructor), do'ppifurush (hat seller), norinxo'r (norin lover). So, the primary function of these morphemes is to generate words, and what distinguishes them from other word-forming morphemes is the ability to form personal nouns from the

noun family. They have no other responsibility than that. It is not feasible to defend and establish that they are polysemantic using this function [9]. A.Hojiev adopts the absolute opinion that "Most morphemes are polysemic in nature". However, the word "majority" appears in this conclusion as well. The word "most" signifies "in most cases (80 percent) it shows the nature of ambiguity." The rationale advanced by A. Hojiev relates to the 20 percent share in the 80/20 law. As stated in the previous section, it is not need to be 80/20. The fact that "most" linguistic phenomena bear this symbol shows the prevalence of polysemic phenomena in Uzbek word-forming suffixes. So the 80/20 rule applies here as well. The Uzbek language follows a regular word order. The arrangement of morphemes in word forms varies depending on word group. This issue will be discussed more below.

A. Composition of noun word forms

According to A. Hojiev, the origin of artificial words can be a root or an artificial term. The word form (the basis for its development) can also be derived from root or manufactured words, such as terimni (terim+ni) and terim-chini (terimchi+ni). However, because word forms of the noun family are not produced from word forms, word forms are not employed to form new forms. For example, the basis for forming a form in the word "terimchi" (picker), with formators terimchi+lar (pickers), terimchlar(i)miz (our pickers).

Also, in the word books, the portion -lar produces the plural form of the word book, -(i)m is the possessive form, and - is the accusative form - all are form-makers, and the book is the foundation for constructing a form, but not a word. That is why, first and foremost, the plural, possessive, and agreement forms of my books' word form (the makers of these forms) have no effect on one another's meaning. Second, if any form inside it is removed, the precise meaning of that form is lost: kitoblarim, kitoblar, kitob, kitobim, kitobni... [9]

According to the scientist, any derived term is formed based on its dictionary definition. The word's form is determined by its categorical meaning, "subject": plural, possessive, and agreement forms are produced from nouns. A word is made up of one basis of word formation and one word builder, whereas word forms related to the noun group might have one base of formation and one or more form builders. When there is more than one formative, each one creates a distinct, independent form of the noun from the formative base. For instance, in word form kitoblarimni each form -lar, -(u)m, -ni builder creates a distinct noun form, including number, possessive, and agreement forms. As a result, it is impossible to generate a categorical form of a word from a noun form [9].

The noun group's word form is composed in the following order: noun, plural, possessive, and agreement. This scenario applies to practically all noun forms. However, there is another order in Uzbek nouns (which is rarely used): Noun + Possession + Plural + Agreement: I saw my sisters. In this situation, the possessive shifts position and precedes the plural suffix, implying respect rather than ownership. Compare my sisters (she has numerous sisters) with my sisters (one sister is used for sizzling). We shall do a statistical analysis of the amount of this application using the corpus materials.

TABLE II. THE FREQUENCY OF THE WORD FORM "OPALARIM" AND "OPAMLAR" IN THE EDUCATIONAL CORPUS OF THE UZBEK LANGUAGE

No	Word	Search results	A link to the search result in the corpus
1	Opalarim	55	https://uzschoolcorpara.uz/uz/Search?q=1&q=opalarim
2	Opamlar	13	https://uzschoolcorpara.uz/uz/Search?q=1&q=opamlar

As seen in the Table II, the form "Noun + plural + possessive + agreement" (my sisters) was used 55 times, whereas the form "Noun + possessive + plural + agreement" was used 13 times. Looking at the percentage, there are several application situations. Grandmothers (plural grandmothers) appear 58 times, with the form grandmothers (respective form) appearing three times. In this situation, the form "Noun + plural + possessive + agreement" is used several dozen times more frequently than "Noun + possessive + plural + agreement." However, this is not the case with the related terms dad and mom. As a result, the rule that "the order of word forms in Uzbek language nouns is fixed" is not absolute: the 80/20 rule applies to this order as well.

The order of word forms in the verb phrase. The composition of the verb form is usually as follows: root + word form + lexical form + syntactic form. For example: jon+lan+tir+il+di (reanimated) In most circumstances, the lexical form generator follows the word-former, but this order is not essential. The order of stem + lexical form generator + word-former may also be seen in nouns generated from the verb stem: o'tkazgich, isitkich (transmitter, heater) IV. DISCUSSION

Word classification concepts. Words are classified into groupings such as nouns, adjectives, and verbs based on their lexical status (consisting of an indivisible unity of sound and meaning) and grammatical traits (morphological and syntactic function). Each word combines lexical and grammatical features. Thus, such groups are referred to as lexical-grammatical categories. The categorization of lexical-grammatical categories (word groups) of words is based on three principles: morphological (1), lexical-semantic (2), and syntactic (3) [10]. "The years in the usage of linguistic corpus made it much easier for the linguists to learn the presence of observation, sample / evidence collection, comparison, and conclusions facilitated this study" [11].

Relying on a morphological feature entails categorizing words according to their formal-grammatical signals and morphological characteristics. These are morphological indications, such as getting or not receiving word-changing affixes, change-invariance (whether number, possession, agreement, or person-number affixes change), type and declension, and so on. Words in the noun category, for example, contain properties like as number change, possessive affixes, and agreement modification. Verbs are inflected by adding person-number affixes (pure verbs only accept short versions of adjectives: I went. Conjugate: I went, I'm a student [12].

In speech, using one instead of the other is a regular normative scenario that arises as a result of the context,

grammatical position, and does not alter the appearance. This form of transfer is called a conversion. For example, there is always one excellent and one terrible, yor-yor (song). Good and terrible words (their usual syntactic purpose is to appear as a determiner or participle) bir yaxshiga bir yomon har yerda bor, yor-yor (song). Words are classified into categories using all of the indicators listed above. As a result, words are classified into lexical-grammatical groups based on a certain set of indicators. Limiting a distinction to one side contradicts the inclusive character of language.

For example, if we are only based on the signification feature (semantic side), the adjective and adverb remain the same (the adjective indicates the sign of the object, the adverb indicates the sign of the sign), while the formation of adverbs from words in the rigid form (we can learn this by their use in speech) in some cases, lexical-grammatical signs such as facultatively, partial variation, different degrees of separation from the paradigm, formation from the adve [13].

If we only rely on meaning, we would add words like suvoq (the building is almost finished: only the plaster remains) and o'roq (mowing) to verbs because they are related to the meaning of action, but these are nouns (action nouns), because a verb must also have a formal sign associated with it. Formally, based only on the sign of change-invariance, only on the morphological side, noun and pronoun (in the form of a noun), adjective and pronoun (this, similar pronouns), adjective and auxiliary remain the same (according to signs such as variation, lack of formal indicators), but they differ sharply from each other. The relationship to the syntactic situation is particularly striking in that it is difficult to confine oneself to a one-sided indication. For example, the word oy (in the meaning of "luna") is a noun (the moon is floating in the sea of the sky). Its conventional grammatical role is to become a possessive, complement, or object. However, it has become a determiner in the conjunction.

1) oy yuz (moon-faced creature) appeared in the regular grammatical role of the adjective;

2) In the example "I'm lonely, the front is gone, let the moon go and survive" (Song), the ravish presented a task.

If we merely examine the grammatical context, the first of them should be classified as a noun, the second as an adjective, and the third as adverb. However, this term is a noun, and its qualities are distinct from those of adjectives and adverbs. As a result, the syntactic sign cannot be the determining factor in word categorization. The 80/20 concept also applies for classifying words. A word's morphological and syntactic properties are used to categorize it. Correct classification is only feasible if the 80/20 principle is applied when classifying words.

While researching the primary and secondary functions of words, A. Botirova stated, "These criteria are connected with the problem of word development in the context of the emergence, formation, and development of the language, on the one hand, and with the polyfunctionality of words, on the other." In other words, diachronically, in addition to the occurrence of certain words leaving their categories and transferring to other categories, the potential of entering at least two paradigms in a given synchronic stage of the language demonstrates that these criteria cannot always be applied concurrently. As a result, it is appropriate to focus on the primary and secondary character of word groupings.

As A. Botirova correctly said, the semantic, syntactic, and morphological criteria for categorizing words in linguistic materials are insufficient to place any word in a category. While the linguistic system's rigidity increases its effectiveness, it also creates a variety of scenarios that impede interpretation and description. First, a homonymous word might fall into more than one group. For example:

1. "What should I do now?" Otabek questioned himself (self-pronoun).
2. The small girl began dancing spontaneously (adverb).
3. Everyone is interested in the country's fate.

Initially, *kasal*, *issiq*, *sovuq*, *salqin*, *nam*, *ko'k* (sick, hot, chilly, cool, wet, and blue) are adjectives as well as nouns. Adjective+noun collocations: hot bread, cold air, cool place, humid climate, green tea; noun: *issiq ta'sir qilgan*, *sovuq urgan*, *salqin tushdi*, *nam tushdi*, *ko'k yuzini bulut qopladi* (affected by heat, struck by cold, fell cool, fell wet, a cloud covered his blue face). One of the most serious issues in linguistics is the homonymy or polysemy of these terms.

Second, there are occasions where a term transitions from one category to another with one or more of its current meanings. For example, when the term road is used repeatedly, it becomes an adjective. The imperfect verb has joined the group of conjunctions. A substantial number of auxiliary and modal words are derived from words that have shifted to this category and have the same meaning.

Third, word groupings can execute functions for one another. For example, in the combination of iron gate, cast-iron stove, wooden spoon, golden autumn, the noun serves as an adjective, but in the combination of cry blood, repetition, terror is prepared.

Fourthly, while fulfilling its job in the speech process, the word may momentarily take the role of another word group. This is riding. For example: The noun that is linked to a noun gets dropped. A good (man) has his head, whereas a bad (man) has his. Nouns appear to possess all noun properties. These include grammatical form, syntactic function, and semantic characteristics.

V. CONCLUSION

As a result, in certain circumstances, the word group's primary purpose is 80 percent, while the secondary function is 20 percent. A number may only be employed as a predicate; nevertheless, the conjunction can occasionally be used instead of the superlative, allowing it to accomplish its purpose. Auxiliaries *bilan*, *-u*, *-yu*, and *-da* serve as equal conjunctions. These demonstrate that word arrangement adheres to the 80/20 rule of meaning and function.

The 80/20 rule in grammatical forms. The plural suffix denotes the plural in 80 percent of occurrences and the singular in 20 percent of cases. For example: *Dadam keldilar*, *oyim aytdilar*, *Navoiy Hazratlari aytadilar*, *Usmon Hazratlari marhamat qiladilar* (My father arrived, my mother announced, His Holiness Navoi states, His Holiness Usman blesses, and the *-lar* suffix expresses respect rather than pluralism. *Bolalar o'qiyaptilar*, *ishchilar dam olyaptilar*, *talabalar ta'tildan qaytdilar* Children are studying, workers are resting, and students have returned from vacation, there use the pure plural form is evident.

The single number indicates the singular in 80 percent of circumstances and the plural in 20 percent of cases. For example, *Qushlar issiq o'lkalarga uchib ketdi*, *paxtalar ochildi*, *mevalar g'arq pishdi* (Birds went to hot places, cottons opened, and fruits drowned, the participle is singular but the meaning is multiple. In 80 percent of situations, the principal agreement reflects its purpose, whereas 20 percent expresses the function of subsidiary agreements. For example, *kitob o'qidim*, *magazin bordim*, *Navoiy g'azali* – I read a book, looked through a magazine, and read Navoi's ghazal. In general, zero forms in all grammatical categories function as marked forms in 20 percent of the situations. *Ye kizma*

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