

USBİLİM 1ST INTERNATIONAL CONGRESS ON ARTIFICIAL INTELLIGENCE STUDIES

USBİLİM

1. Uluslararası Yapay Zeka Çalışmaları Kongresi
27 - 28 Kasım 2021
Ankara



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FACE TO FACE

CONGRESS BOOK

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USBILIM 1ST International Congress On Artificial Intelligence Studies

Edited by

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ABOUT CONGRESS

USBILIM 1ST ST INTERNATIONAL CONGRESS ON ARTIFICIAL INTELLIGENCE STUDIES

•Keynote & Invited Participation Type

DATE – PLACE

NOVEMBER 27 – 28, 2021
ANKARA - TURKEY

ORGANIZATION

USBILIM INTERNATIONAL JOURNAL OF SOCIAL SCIENCES

CONGRESS ORGANIZING BOARD

Head of Organizing Board: Dr Gültekin Gürçay
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Organizing Committee Member: Dr. Zehra Fırat
Organizing Committee Member: Tuğçe Biter

EVALUATION PROCESS

All applications have undergone a double-blind peer review process.

PRESENTATION

Oral presentation

LANGUAGES

Turkish, English, Russian

SCIENTIFIC & REVIEW COMMITTEE

Dr. Gulmira ABDİRASULOVA - Kazak Devlet Kızlar Pedagoji Üniversitesi

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Sonali MALHOTRA - Delhi Balbahtri Academy

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CONGRESS PROGRAM

Online (with Video Conference) Presentation





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IMPORTANT, PLEASE READ CAREFULLY

- To be able to make a meeting online, login via <https://zoom.us/join> site, enter ID instead of “Meeting ID or Personal Link Name” and solidify the session.
- The Zoom application is free and no need to create an account.
- The Zoom application can be used without registration.
- The application works on tablets, phones and PCs.
- Speakers must be connected to the session **10 minutes before** the presentation time.
- All congress participants can connect live and listen to all sessions.
- During the session, your camera should be turned on **at least %70** of session period
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

TECHNICAL INFORMATION

- Make sure your computer has a microphone and is working.
- You should be able to use screen sharing feature in Zoom.
- Attendance certificates will be sent to you as pdf at the end of the congress.
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.
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exp. H-..., S- ... NAME SURNAME



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1st International Congress on Health, Pharmacology and Veterinary

28. 11. 2021		10: 00 – 13:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 1 SESSION: 1		MODERATOR: FARAH BAKHISHLI	
ADEM TEKE EBRU YILDIRIM	Hücre Kültürü Çalışmalarının Sitotoksisite Çalışmalarına Katkısı		
SERRA ORAK MUSTAFA YAMAN ÖMER FARUK MIZRAK	Glutensiz Ürünlerin B Grup Vitamin Kompozisyonunun Belirlenmesi Ve Sağlıklı Beslenme Açısından Değerlendirilmesi		
ASSIS. PROF. K.R. PADMA READER, K.R.DON	Nutritional Quality and Shelf life of Radiation processed Health mix for Anaemia		
MELİKE ERDURAN CANSU AYDIN SERAP YALÇIN AZARKAN	Türkiye’nin İç Anadolu Bölgesinden Elde Edilen Inula helenium Bitkisinin İlaç Dirençli Meme Kanseri Hücre Hatlarında Sitotoksik, Metastatik Etkisinin 2d ve 3d Model Hücre Hatları Üzerinde Araştırılması		
DURMUŞ BURAK DEMİRKAYA MEHMETHAN YILDIRIM SERAP YALÇIN AZARKAN	Sisplatin Dirençli Ve Duyarlı Meme Kanseri Hücre Hatlarında Sodyum Azid’in Sitotoksik, Metastatik Ve Katalaz Enzim Aktivitesi Seviyesindeki Değişikliklerin Karşılaştırmalı Olarak Araştırılması		
ARSLAN SAY DEMET ÇAKIR	Covid-19 Ve Gebelik		



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ARSLAN SAY DEMET ÇAKIR	Covid-19; Başlangıçtan Günümüze Kullanılan İlaçlar
DEMET ÇAKIR ARSLAN SAY	Covit-19 Pandemisi Boyunca Emzirme
DEMET ÇAKIR ARSLAN SAY	Covit-19 Ve Doğum Öncesi Bakım
SEVINJ FATULLAYEVA FARAH BAKHISHLI	About Some Aspects Of Hand Hygiene
FARAH BAKHISHLI SEVINJ FATULLAYEVA	Some Radiation Risks In Oil Production



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1st International Congress on Health, Pharmacology and Veterinary

28. 11. 2021		10: 00 – 13:00	
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HALL: 2 SESSION: 1		MODERATOR: KHANITTA NUNTABOOT	
PRIYADHARSHINI. P	Prediction of Diabetes Mellitus using XG Boost-Gradient Boosting		
RAJARSHI KAYAL DEBOJYOTI BHATTACHARJEE SUDIP K BANERJEE KRISHANU BANIK	Lipid Peroxidation Status in Type-2 Diabetic Population in Kolkata, India		
B. PRAKASH BABU HUBAN THOMAS	Course of Maxillary Artery through Loop of Auriculotemporal Nerve and Deep to Posterior Division of Mandibular Nerve		
S. ABED S. O'NEILL	Nurses' Views on 'Effective Nurse Leader' Characteristics in Iraq		
DO THI HA, KHANITTA NUNTABOOT	Actual Nursing Competency among Nurses in Hospital in Vietnam		
B. R. O. OMIDIWURA, A. F. AGBOOLA, E. A. IYAYI	Effect of L-Dopa on Performance and Carcass Characteristics in Broiler Chickens		
HAMADA A. AHMED, KADRY M. SADEK AYMAN E. TAHA	Impact of Two Herbal Seeds Supplementation on Growth Performance and Some Biochemical Blood and Tissue Parameters of Broiler Chickens		



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1st International Congress on Forensic Sciences and Law

28. 11. 2021		10: 00 – 12:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 3 SESSION: 1		MODERATOR: NAZAKAT GAZİYEVA	
METİN PEHLİVAN	Uzlaştırma Raporunun İş Kazasından Kaynaklı Tazminat Taleplerine Etkisi		
NAZAKAT GAZİYEVA	Fonoskopik Çalışmalarda Keşfedilen Bireysel Konuşma Özelliklerinin Önemi		
HİLAL İFAKET AKBAŞ	Adli Bilim Eğitimi Kıtı Avrupası’nda Ve Türkiye Perspektifinde Değerlendirme		
HİLAL İFAKET AKBAŞ	Suçlu Davranışının Açıklanmasında Suç Ve Çocuk		
DR. ÖĞR. ÜYESİ BUKET ÇATAKOĞLU AYDIN	Elektronik Bono Ve Çek İle Kambiyo Senetlerinde Değişen Özellikler		
TUĞÇE BİTER	Cinsel Saldırıda Adli Hemşirenin Roller		
DOÇ. DR. AHMET ERTUĞRUL	Uluslararası Ticaret Hukuku Bağlamında Pandemi Dönemindeki İşletme Taahhütlerinin Analizi		



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1st International Congress on Forensic Sciences and Law

28. 11. 2021		10: 00 – 12:00	
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HALL: 4	SESSION: 1	MODERATOR:	ROXAN VENTER
MARIA LUBOMIRA KUBICA	Legal Doctrine on Rylands v. Fletcher: One more time on Feasibility of a General Clause of Strict Liability in the UK		
NADIYA MAKSIMENTSEVA	Distinctive Features of Legal Relations in the Area of Subsoil Use, Renewal and Protection in Ukraine		
FAHAD ALANAZI ANDREW JONES	A Method to Enhance the Accuracy of Digital Forensic in the Absence of Sufficient Evidence in Saudi Arabia		
ROXAN VENTER	Enforcement of Decisions of Ombudsmen and the South African Public Protector: Muzzling the Watchdogs		
MAHDI KARIMI	The Role of the Accused's Attorney in the Criminal Justice System of Iran, Mashhad 2014		
ABDELHAFEZ ABDEL HAFEZ	Dependency Theory on Examining the Relationship between the United States and the Middle East: In the Case of Iran, Saudi Arabia, and Turkey		



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1st International Congress on Organizational Behavior Researches and Management

28. 11. 2021		10: 00 – 12:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 5 SESSION: 1		MODERATOR: Dr. ÖĞR. ÜYESİ ALAATTİN FIRAT	
FAHRİ ALP ERDOĞAN MURAT SAĞBAŞ		Covid-19 Sürecinde Örgütlerin Dijital Liderlere Artan İhtiyacı	
DR. ZEHRA FIRAT Dr. ÖĞR. ÜYESİ ALAATTİN FIRAT		Liderlik Özellikleri Ve Kurumsal Kimlik Arasındaki İlişkinin Analizi Çalışması	
DR. NADİRE KANTARCIOĞLU		Örgütsel Vatandaşlık Davranışı ve Duygusal Zeka Arasındaki İlişki; Bankacılık Sektöründe Bir Araştırma	
WAFA GHONAIM		A Multi-Agent Smart E-Market Design at Work for Shariah Compliant Islamic Banking	
DR. LEMAN KUZU		Kobilerde Etkin Liderlik Ve Etkin Liderliğin Çalışan Motivasyonu Üzerine Etkilerinin İncelenmesi: İstanbul İl Sınırları Avcılar İlçesinde Bulunan 5 Kobinin Çalışanları Üzerine Bir Araştırma	
DR. GÜLTEKİN GÜRÇAY		Yönetici Ve İşverenlerin Dini Tutum Ve Davranışlarının Çalışanların Örgütsel Adalet Algısına Etkisi	



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1st International Congress on Organizational Behavior Researches and Management

28. 11. 2021 Meeting ID: 853 0711 8876		10: 00 – 12:00 Passcode: 281121	
HALL: 6		SESSION: 1	MODERATOR: ELINA BAKHTIEVA
CHARITA JASHI		Applications of Social Marketing in Road Safety of Georgia	
FEDDAOUI AMINA		UK GAAP and IFRS Standards: Similarities and Differences	
ELINA BAKHTIEVA		Digital Marketing Maturity Models: Overview and Comparison	
DINABANDHU MAHATA AMIT KUMAR AMBARISH KUMAR RAI		Female Work Force Participation and Women Empowerment in Haryana	
ENELI KINDSIKO KULNO TÜRK		Detecting Major Misconceptions about Employment in ICT: A Study of the Myths about ICT Work among Females	



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1st International Interdisciplinary Congress on Intelligence and International Relations

28. 11. 2021		10: 00 – 12:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 7		SESSION: 1	MODERATOR: PHATTHANAN CHAIYABUT
HACI MEHMET BOYRAZ		Hakikat-Sonrası Dönemde Türkiye Aleyhinde Dezenformasyon Faaliyetleri	
HACI MEHMET BOYRAZ		Policy Of Greek Cypriot Administration Of Southern Cyprus Towards PKK	
TAPAO KANYAPAT U.		The Operation Strategy and Public Relations Trend for Public Relations Strategies Development in Thailand	
İBRAHİM BORA ORAN		Uluslararası Ekonomide Doğrudan Yabancı Yatırımların Bölgesel Dağılımının Analizleri	
ZHANAR ALDUBASHEVA, MUKHTAR SENGGIRBAY, ELNURA ASSYLTAJEVA		The U.S. and Western Europe Role in Resolving the Religious Conflicts in Central Asia	
DIMITRIS GEORGOUTSOS, PETROS M. MIGIAKIS		European and International Bond Markets Integration	
SENIAN MALIE ORİAH AKIR		Determinants for Success in Expatriation of Malaysian International Corporations	
PHATTHANAN CHAIYABUT		The Effect of the National Culture on the International Business	



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1st International Congress on Artificial Intelligence Studies

28. 11. 2021		14: 00 – 16:00	
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HALL: 1	SESSION: 2	MODERATOR: DR. ÖĞR. ÜYESİ ASLI ÜNER KAYA	
DR. ÖĞR. ÜYESİ ASLI ÜNER KAYA		Felsefi Zombilerin Düşünülebilirliği Fizikalizm İçin Ne İfade Eder?	
BOUNSONG SORKEOMANY PHD PHONESAVANH THEPPHASOULITHONE SOULICHANH LUANGSOMBATH THIPPHAVANH KHANTHAPHONE SOMPHIEN MAHAPHOM THIPHACHANH NOUTHAPHONE		The Language Learning Styles and Learning Strategies Relationship in Depart of English, Faculty of Education, Champasack University	
DAMLA TIPIOĞLU PH.D. AKIN ÖZKAN PH.D. HILAL KAYA PROF. DR. FATİH VEHBI ÇELEBİ		Automatic Segmentation And Counting Of Leukemia Cancer Cells On Hemocytometer With U-Net	
AYHAN TOKMAK DOÇ. DR. ÖVGÜ CEYDA YELGEL		Yapay Sinir Ağları İle Yenilenebilir Enerji Kaynaklarından Elektrik Üretimi Tahmini	



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HALL: 2	SESSION: 2	MODERATOR: ZELJKO PANIAN	
ZELJKO PANIAN	A New Dimension of Business Intelligence: Location-based Intelligence		
LIPENG ZHANG, LIMEI LI, YANMING PEARL ZHANG	Using Information Theory to Observe Natural Intelligence and Artificial Intelligence		
MARTÍN AGÜERO, FRANCO MADOU, GABRIELA ESPERÓN, DANIELA LÓPEZ DE LUISE	Artificial Intelligence for Software Quality Improvement		
KHALED M. ALHAWITI	Advances in Artificial Intelligence Using Speech Recognition		
MAAMAR ALI SAUD AL TOBI, GERAINT BEVAN, K. P. RAMACHANDRAN, PETER WALLACE, DAVID HARRISON	Experimental Set-Up for Investigation of Fault Diagnosis of a Centrifugal Pump		



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DEEPIKA BHALLA,
RAJ KUMAR BANSAL,
HARI OM GUPTA

Application of Artificial Intelligence Techniques for Dissolved Gas Analysis of Transformers-A
Review



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28. 11. 2021		14: 00 – 16:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 3	SESSION: 2	MODERATOR:	DR. LEMAN KUZU
MELİKE ŞEN PROF. DR. AHMET ÜSTÜN	Üstün Yetenekli Çocukların Sınıf Ortamında Karşılaştıkları Sorunlara Yönelik Öğretmen Algılarının İncelenmesi		
TAMER SARI	Sembolik Çerçeve de Okul Müdürü Makam Odalarını Anlamak		
CAHİT TAŞDEMİR	Lise Son Sınıf Öğrencilerinin Matematik Öğrenimi İle İlgili İnançları		
HALİL TAŞ	Sınıf Öğretmenlerinin Hayat Bilgisi Dersindeki Sınıf İçi Öğretim Uygulamalarına İlişkin Bir İnceleme		
SERDAR YEŞİL GÜROL ZIRHLIOĞLU AHMET YAYLA	Öğretmen Ve Öğretmen Adaylarının Sosyal Bilgiler Dersinde Adalet Değerine İlişkin Tutumu		
SERDAR YEŞİL AHMET YAYLA GÜROL ZIRHLIOĞLU	Öğretmen Ve Öğretmen Adaylarının Sosyal Bilgiler Dersinde Adalet Algısı		
HÜSEYİN ÇETİN DR. ÖĞR. ÜYESİ GÜLŞAH TURA	Sınıf Öğretmenlerinin Uzaktan Eğitime Yönelik Öz Yeterliklerinin İncelenmesi		



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HALL: 4	SESSION: 2	MODERATOR:	DR. ÖĞR. ÜYESİ MUHAMMED SAİD AKAR
ÖZLEM ÇEVİK HAYRİYE SOYALP	Güncellenen Beşinci Sınıf Türkçe Ders Kitabının Değerlendirilmesi		
CEMALETTİN YİĞİT PROF. DR. HATİCE KUMCAĞIZ	Lise Öğrencilerinin Akademik Erteleme Davranışları İle Okul Tükenmişliği Arasındaki İlişkinin İncelenmesi		
FATMA TİRYAKİ DR. ÖĞR. ÜYESİ MUHAMMED SAİD AKAR	Öğretmen Adaylarının Sosyalleşme Taktiklerinin Farklı Değişkenler Açısından Belirlenmesi		
MARTINA HOLENKO DLAB, NATASA HOIC-BOZIC	Student and Group Activity Level Assessment in the ELARS Recommender System		
EDA YÜKSEL KARADAĞ DR. ÖĞR. ÜYESİ MUHAMMED SAİD AKAR	Öğretmen Adaylarının Analojiye Yönelik Tutumlarının Farklı Değişkenler Açısından Belirlenmesi		
FİLİZ AYDIN DR. ÖĞR. ÜYESİ MUHAMMED SAİD AKAR	Öğretmen Adaylarının Yazmaya Yönelik Tutum Ve Kaygılarının Farklı Değişkenler Açısından Belirlenmesi		



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SERAP LALE IŞIK İBRAHİM KAYA	Tarih Öğretiminde Yenilikçi Etkinliklerle Materyal Hazırlama
PHONESOUDA VONGTHONG SOULICHANH LUANGSOMBATH THIPHACHANH NOUTHAPHONE BOUNMY PHALYCHAN SOULIYA KEOVILAYSACK THIPPHAVANHKHANTAPHONE CHANSY PHOMPHITHAK DAOVY PONGPANYA	Thriving Foundational Skills For Students In The Future Work



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1st International Congress on Education Studies

28. 11. 2021		14: 00 – 16:00	
Meeting ID: 853 0711 8876		Passcode: 281121	
HALL: 5	SESSION: 2	MODERATOR:	REIKO YAMAMOTO
SANIA K. RAO	Relationship Between Time Management Behaviour,Job Satisfaction And Job Performance Of Teachers In Higher Education Institutions In India		
OKESH GOWDA J K V VISWANATHA	A Approach In Fuzzy Sets For Feature Reduction		
ROHINI KARUNAKARAN, SRIKUMAR P S	Item Analysis To Improve The Fairness Of Multiplechoice Questions		
SWATI AGARWAL SHWETA JAIN	Evolution & Development Of Education For CWSN (Child With Special Needs) In India		
RAMINDER PAL SINGH, SANGEETA ARORA	ERP Challenges In Higher Education		
OMAR ALSHEHRI VIC LALLY	Students’ Perceptions of the Use of Social Media in Higher Education in Saudi Arabia		
REIKO YAMAMOTO	The Effect of Realizing Emotional Synchrony with Teachers or Peers on Children’s Linguistic Proficiency: The Case Study of Uji Elementary School		
SOBHY FATHY A. HASHESH	The Effect of an Al Andalus Fused Curriculum Model on the Learning Outcomes of Elementary School Students		



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1st International Congress on Mathematics, Engineering, Architecture

28. 11. 2021		14: 00 – 16:00	
Meeting ID: 873 3586 1181		Passcode: 281121	
HALL: 6	SESSION: 2	MODERATOR: ÖĞR. GÖR. DR. HÜSNÜ AYDEMİR	
MELİH GÜZEL ÖZLEM AKPINAR	Ekmek Atıklarının Komagataeibacter hansenii GA2016 İle Bakteriyel Selüloz Üretiminde Kullanılarak Değerlendirilmesi		
CHANSY PHOMPHITHAK SOULICHANH LUANGSOMBATH KHONGSOMBATH PHOMMATHEP PHOOUTHONG VANHNI VONGKHAM SOMPHANE SYSAVATH PHONESODA VONGTHONG DALASOUK KHAMLUNVILAIVONG	Factors Associated With Road Accidents Among Motor Vehicle Drivers At Champasack Province, Lao PDR		
ÖĞR. GÖR. DR. HÜSNÜ AYDEMİR DR. ÖĞR. ÜYESİ MÜSLÜM EROL	Ifluence Of Ambient Temperature On Diameter And Pore Size Of Electrospun Nanofibers		
G. VIRANYA, G.SRIDEVI	Design Of Low Power And High Speed FIR Filter Using Koggestone CSLA		



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1st International Congress on Mathematics, Engineering, Architecture

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HALL: 7	SESSION: 2	MODERATOR:	K. PRASANNA LAKSHMI
K. PRASANNA LAKSHMI	Motion Planning for Multiple Robots in Minimum Time Interval in Cluttered Environment		
SAEED SAYYAD HAGH SHOMAR	Analysis and Evaluation of the Public Responses to Traffic Congestion Pricing Schemes in Urban Streets		
CATHERINE MAWARE, OLUFEMI ADETUNJI	Lean Impact Analysis Assessment Models: Development of a Lean Measurement Structural Model		
FELICIA MAGPANTAY KENZU ABDELLA	A Two-Species Model for a Fishing System with Marine Protected Areas		
ALEXANDER Y. VANINSKY	Environmental Performance of the United States Energy Sector: A DEA Model with Non-Discretionary Factors and Perfect Object		

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ÖZET

Bilincin ne olduğu ve fiziksel dünyada nasıl ortaya çıktığı zihin felsefesinin en zorlu sorunlarından biridir. Bu sorunu çözme girişimiyle ortaya çıkan fizikalizm genel anlamda evrendeki herşeyin fiziksel olduğunu savunan görüştür. Fizikalistler zihinsel durum veya süreçlerin, fiziksel durum veya süreçlerle özdeş olduğunu iddia ederler. 20. yüzyılın sonlarında bilinç ile ilgili tartışmalarda önemli bir rol oynamaya başlayan zombi argümanı en iyi bilinen anti-fizikalist argümanların başında gelir. Zombi argümanı zihin felsefesinde “düşünülebilirlik argümanları” (*conceivability arguments*) olarak bilinen argümanlar sınıfındadır. Böylesi argümanlar gerçekte olmayan bazı senaryoların düşünülebileceğini iddia ederek, bu senaryoların düşünülebilir olmasından onların mümkün olduğu sonucunun çıkabileceğini ima eder. Zombi argümanı, bilinçli insanların, bilinçsiz olan fiziksel ve davranışsal kopyalarına karşılık gelen zombilerin düşünülebilmesine dayanır. Fiziksel olarak bizimle aynı olan zombiler fenomenal yaşantılara sahip olmasalar da insan davranışlarından ayırt edilemeyen davranışlar sergileyebilirler. Zombi argümanını fizikalizmi reddetmek için kullananların başında David Chalmers gelir (1996). Chalmers’a göre fiziksel olarak bizim dünyamızla özdeş olan ancak bilinçli varlıklar yerine onların zombi ikizleriyle dolu bir dünya tasavvur etmek mümkündür. Böyle bir dünya düşünülebilirse metafiziksel olarak mümkündür. Eğer fenomenal yaşantıları olmayan zombi ikizlerimizden oluşan bir dünya metafiziksel olarak olanaklıysa, bilinç fiziksel durum veya süreçlerden tamamen ayrı bir şey olmalıdır. O halde fizikalizm yanlıştır. Bu bildiride ilk olarak zombi argümanının fizikalizm için nasıl bir problem teşkil ettiğine detaylı bir şekilde değineceğim. Ardından, zombilerin düşünülebilir olmasından onların imkanına dair bir iddiaya geçmenin uygun olup olmadığını ve bu argümanın fizikalizmin yanlışlığını göstermek için yeterli sağlamlığa sahip olup olmadığını tartışacağım.

WHAT DOES THE CONCEIVABILITY OF PHILOSOPHICAL ZOMBIES MEAN FOR PHYSICALISM?

ABSTRACT

What consciousness is and how it emerges in the physical world is one of the most challenging problems in philosophy of mind. Physicalism which emerged to solve this problem is the argument asserting that everything in this universe is physical. Physicalists argue that mental states and processes are identical to physical states and processes. Zombie argument which started to have a significant role in arguments about consciousness at the end of 20th century is one of the most-known anti-physicalist arguments. In the philosophy of mind, zombie argument is within the argument class known as "*conceivability arguments*". Such arguments claim that some scenarios which do not exist can be conceived and imply that we can conclude these scenarios are possible since they can be conceived. Zombie argument is based on the conceivability of zombies which correspond to the unconscious physical and behavioral copies of conscious people. Although zombies, who are physically the same as us, do not have phenomenal experiences, they can exhibit behaviors that are indistinguishable from human behavior. David Chalmers (1996) is one of the leading people using zombie argument to reject the physicalism. According to Chalmers, it is possible to imagine a world that is identical to our world in terms of physical aspects but full of zombie twins of conscious creatures. If such a world can be conceived, it is metaphysically possible. If a world of zombie twins without phenomenal experiences is metaphysically possible, consciousness must be something entirely separate from physical states or processes. Then, physicalism is false. In this paper, I will firstly address what kind of problem zombie argument constitutes for physicalism in detail. Then, I will argue if it is appropriate to discuss the possibility of zombies due to their conceivability and if this argument is solid enough to show the inaccuracy of physicalism.

**LANGUAGE LEARNING STYLES AND LEARNING STRATEGIES RELATIONSHIP
IN DEPARTMENT OF ENGLISH, FACULTY OF EDUCATION, CHAMPASACK
UNIVERSITY**

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Abstract

This study was conducted at Department of English, Faculty of Education, Champasack University aiming to investigate the situations of students' learning styles preference and strategies used, and to examine the significances between language learning styles, learning strategies and base on their gender. The 180 students were selected equally; 90 males and 90 females by mixed methods sampling strategies techniques systematically. The perceptual-questionnaire was applied by using the 70-item with five Likert scales and related structured-interview was also conducted with 20 students. The questionnaire's pilot reliability was found at 0.75 Alpha values of acceptable. The data analysis was analyzed by statistical independent t-test, Pearson Correlation, Mean scores and Standard deviation of each item calculating accordingly with the responded scores. The findings of the study revealed that the kinesthetic learning style was the most preferred. Closely found, visual, auditory and group learning styles accordingly related. Moreover, the meta-cognitive, compensatory, and cognitive strategies were the most often frequency strategies used, and relatively used by memory-related and social strategies. To examine gender's perception towards learning styles and learning strategies; there were statistically significant differences between males and females in auditory, kinesthetic, tactile, individual and group learning styles and there were statistically significant differences between males and females in memory-related, cognitive, affective and social strategies. Final results were also proved that 'Language learning styles' had almost significantly correlated with the 'Language learning strategies'

Key words: Learning Styles, Learning Strategies, gender, English Students

AUTOMATIC SEGMENTATION AND COUNTING OF LEUKEMIA CANCER CELLS ON HEMOCYTOMETER WITH U-NET

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ABSTRACT

Cell number is one of the parameters used to understand cell density. Cell density is sometimes used in diagnosing disease and sometimes in drug experiments. Although there are machines that count cells automatically, experts usually count cells manually with hemocytometer due to the machines high cost. Manual cell counting is time-consuming and demanding. In this study, deep learning-based semantic cell segmentation is proposed for automatic cell counting. The dataset analysed in the study includes 468 light microscope images on the hemocytometer of HL60 leukemia cancer cells taken from cell culture. The model was able to overcome the brightness differences and cell shape deformations in the dataset. Pixel accuracy and intersection over union (IOU) metrics were used to measure cell segmentation success in the network trained with U-Net architecture. 421 images were used for training and 47 images were used for testing. According to the test results, pixel accuracy was 98% and IOU was 88%. There are actually 636 cells and the number of cells obtained with connected component analysis from the segmented cells is 557. The number of cells was predicted with 87% success. By converting the method used in the study into practice, with hemocytometer, which is used as the basic material in cell counting in all cell culture labs, experts will be able to perform cell counting automatically without using a high-cost automated cell counter machine, instead of manually. Proposed method will contribute both time and budget saving.

Key words: Cell segmentation, Cell counting, U-Net, Hemocytometer, Deep learning

1. INTRODUCTION

One of the challenging problems in computer vision and digital image processing is image segmentation. The purpose of image segmentation is to group similar areas in the image to reveal the information in the image and to facilitate its analysis. There are two types of segmentation, semantic and instance. It basically maps each pixel in the image to the given label classes. It has

uses in various fields; autonomous vehicles, machine vision, video surveillance, satellite images and medical images.

In the medical area, diagnose with image segmentation will be objective, faster and less costly. Ultrasound imaging, microscopy, magnetic resonance, nuclear medicine functional imaging, and computed tomography (CT) images types can be used for diagnose and treatment monitoring with image segmentation [1]. For example, cell density and structure in the tissue taken from the patient is important for pathologists in making the diagnosis. It is possible to make a faster and less costly diagnosis with automatic cell segmentation from microscope images. Another example is cell counting in cell culture. Although there are machines developed for this job, due to the high cost, most of the experts count cell manually using a hemocytometer [2]. Manual cell counting is time-consuming, error-prone and demanding for specialists.

In this study, cell segmentation with deep learning-based U-Net architecture is proposed to automate cell counting. The dataset in this study was used previously. In their study, automatic cell counting was performed by Support Vector Machine, K-Nearest Neighbors and Random Forest algorithms from machine learning techniques [3]. In this study, a deep learning-based model was used for cell segmentation for the first time in this dataset.

2. RELATED WORKS

In the literature various segmentation methods such as thresholding segmentation [4], edge-based segmentation [5], region-based segmentation [6], watershed segmentation [7], clustering-based segmentation [8] and learning-based segmentation [9] have been developed.

Recently, deep learning models are used for segmentation due to its high performance. Deep learning models include fully convolutional networks, encoder-decoder networks, region based convolutional neural networks, generative adversarial networks etc. [10].

Long et al. removed fully connected layers from classification networks such as AlexNet, VGG and GoogleNet and used only convolutional layers. The main purpose of this network, which they call Fully convolutional network (FCN), is to obtain a segmented output image with the same resolution as the input image resolution. A differentiable interpolation layer has been added to obtain the output size with the same resolution as the input. Tested on PASCAL VOC, NYUDv2, and SIFT Flow have achieved high performance [11].

Ronneberger et al. proposed the U-Net architecture for biomedical images by combining the convolutional network with the encoder decoder network. Unlike FCN, upsampling layers are more than one and feature maps are concatenated with upsampling layers. U-Net was segmented neuronal structures in EM stacks and won the ISBI 2012 competition. They showed that with this architecture, the system is trained with a very small dataset and it performs better than the previous best method, the sliding-window convolutional network [12]. Falk et al. using U-Net, they developed a plugin called ImageJ for cell counting and detection [13].

Another example of encoder decoder network is SegNet that is suggested by Badrinarayanan et al. It is similar to the U-Net architecture. Differently, while upsampling, it uses max pooling indices instead of feature map concatenation. In this way, inference time and memory performance gave better results. Trainable parameters are less compared to other architectures. It has been especially developed to scene understanding [14].

3. MATERIALS AND METHODS

3.1. Dataset

In this study, the HL60_HEM40x_CC dataset was used (available at <https://www.atilim.edu.tr/tr/ceac/page/3884/arastirma>) [15]. This dataset includes image sets, ground truth locations data and region of interest boundary location data.

Image sets contains images that are Human Promyelocytic Leukemia (HL60) cancer cell with magnification factor 40X by hemocytometer (HEM40X) for cell counting (CC) [15]. It consists of a total of 468 RGB images with 1200x1600 resolution and different brightness.

Experts labeled cell locations as positive and non-cell (objects outside the cell, etc.) locations as negative. A total of 6890 cell coordinates and 8131 non-cell coordinates are included in the ground truth locations data. Coordinates are defined in bounding box format. The x, y coordinates define the upper left corner of the bounding box, and the height and width determine the size of the bounding box.

Region of interest boundary location gives the coordinates of the countable area of the hemocytometer in cell annotation format in 4 different boxes as upper, lower right and left. Cells in the right line or bottom line are not counted according to the counting rule in the hemocytometer [16]. This prevents double counting.

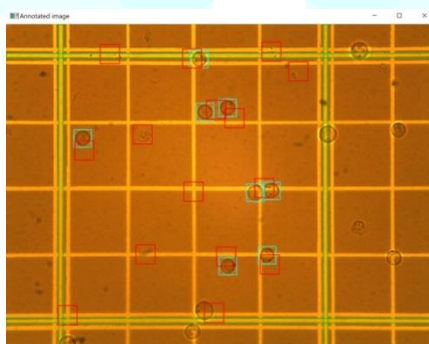


Image 1. HL60 cancer cell images with magnification factor 40x by hemocytometer. Countable area of the hemocytometer is surrounded by big green bounding box. Green bounding boxes represent ground truth cell positive location and red bounding boxes represent ground truth cell negative location.

3.2. Hardware and Libraries

Graphics card NVIDIA GeForce GTX 1050 is used. Device memory size is 4GB. Tensorflow gpu, sklearn, skimage, open cv and matplotlib are the main libraries used.

3.3. Preprocess

All images are labeled according to ground truth cell location annotations and recorded as gray level images. In labeled gray level images, the pixel value is represented by 1 for each pixel which belonging to cells and 0 for non-cell areas. Image resolutions of 1200x1600 are resized to 128x128.

3.4. Methods

U-Net architecture is an encoder decoder model. Its name comes from its shape. It consists of two symmetrical parts that encoding/contracting path and decoding/expansive path. By performing down sampling in the contracting path section, semantic and context information is revealed (capture). Convolutional network architecture is applied. Each step contains repeated process of two 3x3 convolutions that followed by a rectified linear unit (ReLU) and a 2x2 max pooling. Feature channel counts are doubled with each step. Upsampling is done with expansive path which is symmetric the contracting path. Thus, spatial information is recovered. Each step contains 2x2 up-convolution , feature map that obtained from cropping contracting path concatenation and two 3x3 convolutions followed by ReLU. In the last layer, feature vectors are mapped to number of classes with 1x1 convolution [12].

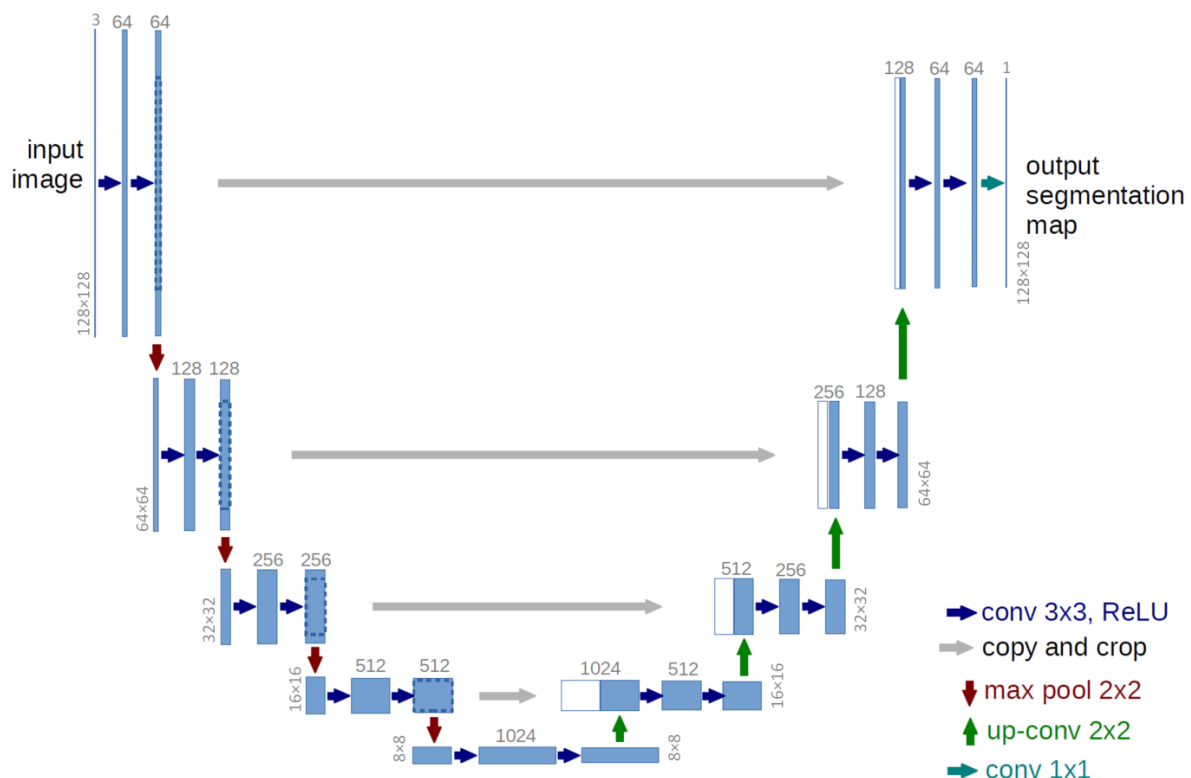


Figure 1. U-Net architecture [12]

During the training phase, Adam optimization algorithm which is implemented by Tensorflow was used. Binary crossentropy was chosen as the loss function and sigmoid was chosen as the energy function. The images were used 90% for training and 10% for testing. In the test results, the threshold value was chosen 0.5 for pixel classification. In order to find out how many cells are on the segmented image, connected component analysis, which is a graph theory algorithm, was applied.

4. RESULTS AND CONCLUSION

In total, 421 of 468 images were used for training and 47 for testing. During the training, 10% of the training data was used for validation. Pixel accuracy and intersection over union metrics were used to evaluate the results. According to the test results, pixel accuracy was 98% and IOU was 88%. There are actually 636 cells and the number of cells obtained with connected component analysis from the segmented cells is 557. The number of cells was predicted with 87% success.

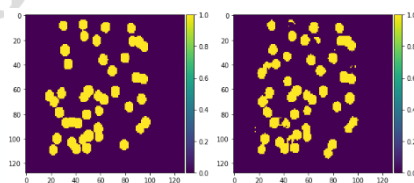


Image 2. The image on the left shows the output labeled according to the ground truth. The image on the right shows the predicted segmented output.

Hemocytometer is used as the basic material for cell counting in all cell culture labs. In this paper proposed method via, experts will be able to automatically count cells using hemocytometer without using a high-cost automated cell counter machine. As a result, experts will be able to count cells by spending less money and spending less time. The parameters which is used in training can be tunable for obtain better results.

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REFERENCES

- [1] El Jurdi, R., Petitjean, C., Honeine, P., Cheplygina, V., & Abdallah, F. (2021). High-level prior-based loss functions for medical image segmentation: A survey. *Computer Vision and Image Understanding*, 210, 103248.
- [2] Ongena, K., Das, C., Smith, J. L., Gil, S., & Johnston, G. (2010). Determining cell number during cell culture using the Scepter cell counter. *Journal of visualized experiments: JoVE*, (45).
- [3] Özkan, A., İşgör, S. B., Şengül, G., & İşgör, Y. G. (2018). Computer vision based automated cell counting pipeline: a case study for HL60 cancer cell on hemocytometer. *Biomedical Research (0970-938X)*, 29(14).

- [4] Otsu, N. (1979). A threshold selection method from gray-level histograms. *IEEE transactions on systems, man, and cybernetics*, 9(1), 62-66.
- [5] Gupta, D., & Anand, R. S. (2017). A hybrid edge-based segmentation approach for ultrasound medical images. *Biomedical Signal Processing and Control*, 31, 116-126.
- [6] Kashyap, R., & Gautam, P. (2015, November). Modified region based segmentation of medical images. In *2015 International Conference on Communication Networks (ICCN)* (pp. 209-216). IEEE.
- [7] Najman, L., & Schmitt, M. (1994). Watershed of a continuous function. *Signal Processing*, 38(1), 99-112.
- [8] Dhanachandra, N., Manglem, K., & Chanu, Y. J. (2015). Image segmentation using K-means clustering algorithm and subtractive clustering algorithm. *Procedia Computer Science*, 54, 764-771.
- [9] Mao, K. Z., Zhao, P., & Tan, P. H. (2006). Supervised learning-based cell image segmentation for p53 immunohistochemistry. *IEEE Transactions on Biomedical Engineering*, 53(6), 115
- [10] Minaee, S., Boykov, Y. Y., Porikli, F., Plaza, A. J., Kehtarnavaz, N., & Terzopoulos, D. (2021). Image segmentation using deep learning: A survey. *IEEE Transactions on Pattern Analysis and Machine Intelligence*.
- [11] Long, J., Shelhamer, E., & Darrell, T. (2015). Fully convolutional networks for semantic segmentation. In *Proceedings of the IEEE conference on computer vision and pattern recognition* (pp. 3431-3440).
- [12] Ronneberger, O., Fischer, P., & Brox, T. (2015, October). U-net: Convolutional networks for biomedical image segmentation. In *International Conference on Medical image computing and computer-assisted intervention* (pp. 234-241). Springer, Cham.
- [13] Falk, T., Mai, D., Bensch, R., Çiçek, Ö., Abdulkadir, A., Marrakchi, Y., ... & Ronneberger, O. (2019). U-Net: deep learning for cell counting, detection, and morphometry. *Nature methods*, 16(1), 67-70.
- [14] Badrinarayanan, V., Kendall, A., & Cipolla, R. (2017). Segnet: A deep convolutional encoder-decoder architecture for image segmentation. *IEEE transactions on pattern analysis and machine intelligence*, 39(12), 2481-2495.
- [15] <https://www.atilim.edu.tr/tr/ceac/page/3884/arastirma>
- [16] Cadena-Herrera, D., Esparza-De Lara, J. E., Ramírez-Ibañez, N. D., López-Morales, C. A., Pérez, N. O., Flores-Ortiz, L. F., & Medina-Rivero, E. (2015). Validation of three viable-cell counting methods: manual, semi-automated, and automated. *Biotechnology Reports*, 7, 9-16.

YAPAY SİNİR AĞLARI İLE YENİLENEBİLİR ENERJİ KAYNAKLARINDAN ELEKTRİK ÜRETİMİ TAHMİNİ

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ÖZET

Günümüzde ilerleyen teknolojik gelişmelere bağlı olarak Dünya’da elektrik enerjisine olan ihtiyaç sürekli olarak artış göstermektedir. Artan elektrik enerjisi ihtiyacımızın temiz ve yenilenebilir enerji kaynaklarından karşılanabilmesi mümkündür. Bu bağlamda yenilenebilir enerji kaynaklarının kullanımına ait geleceğe yönelik bir projeksiyon sunması amacı ile çalışmamızda yapay sinir ağları (YSA) modeli oluşturularak rüzgar enerjisinden elektrik üretimi tahmini yapılmıştır. Oluşturduğumuz YSA modelinin eğitim aşamasında farklı çeşitlerdeki rüzgar türbin modellerinin çıkış güçleri kullanılmış; test aşamasında ise rüzgar hız verileri kullanılmıştır. YSA ile rüzgar enerjisinden elektrik üretim tahmini yapılırken Rize İl Sağlık Müdürlüğü’nün yüklü elektrik tüketim miktarını rüzgar enerjisinden karşılayabilmek için Rize ili merkezine ait rüzgar hızı verileri girdi verisi olarak girilmiştir ve 6 farklı rüzgar türbinine ait çıkış güçleri ise çıkış verisi olarak kullanılmıştır.

Anahtar Kelimeler: yapay sinir ağları ; yenilenebilir enerji ; rüzgar enerjisi ; rüzgar hızı

FORECAST OF ELECTRICITY GENERATION FROM RENEWABLE ENERGY SOURCES WITH ARTIFICIAL NEURAL NETWORKS

ABSTRACT

Today, depending on the advancing technological developments, the need for electrical energy in the world is constantly increasing. It is possible to meet our increasing electrical energy needs from clean and renewable energy sources. In this work, with the aim of presenting a future projection of the use of renewable energy sources, an artificial neural network (ANN) model has been created in our study and an estimation of electricity generation from wind energy has been made. In the training phase of the ANN model we created, the output powers of different types of wind turbine models were used; in the test phase, wind speed data were used. While estimating electricity production from wind energy with ANN, wind speed data of Rize city center were entered as input data in order to meet the installed electricity consumption of Rize Provincial Health Directorate from wind energy, and output power of 6 different wind turbines was used as output data.

Keywords: artificial neural networks ; renewable energy ; wind power ; wind speed

A NEW DIMENSION OF BUSINESS INTELLIGENCE: LOCATION-BASED INTELLIGENCE**Prof. Zeljko Panian**

University of Zagreb, Croatia

Abstract:

Through the course of this paper we define Locationbased Intelligence (LBI) which is outgrowing from process of amalgamation of geolocation and Business Intelligence. Amalgamating geolocation with traditional Business Intelligence (BI) results in a new dimension of BI named Location-based Intelligence. LBI is defined as leveraging unified location information for business intelligence. Collectively, enterprises can transform location data into business intelligence applications that will benefit all aspects of the enterprise. Expectations from this new dimension of business intelligence are great and its future is obviously bright.

Keywords: Business intelligence, geolocation, location-based intelligence, innovation, location-intelligent business

USING INFORMATION THEORY TO OBSERVE NATURAL INTELLIGENCE AND ARTIFICIAL INTELLIGENCE

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²MMI, Kaki Bukit Industrial Estate, Singapore

³Hong Kong University

Abstract:

This paper takes a philosophical view as axiom, and reveals the relationship between information theory and Natural Intelligence and Artificial Intelligence under real world conditions. This paper also derives the relationship between natural intelligence and nature. According to communication principle of information theory, Natural Intelligence can be divided into real part and virtual part. Based on information theory principle that Information does not increase, the restriction mechanism of Natural Intelligence creativity is conducted. The restriction mechanism of creativity reveals the limit of natural intelligence and artificial intelligence. The paper provides a new angle to observe natural intelligence and artificial intelligence.

Keywords: Natural intelligence, artificial intelligence, creativity, information theory.

ARTIFICIAL INTELLIGENCE FOR SOFTWARE QUALITY IMPROVEMENT**Martín Agüero¹, Franco Madou², Gabriela Esperón³, Daniela López De Luise⁴**^{1,2,3,4}Universidad de Palermo, Argentina**Abstract:**

This paper presents a software quality support tool, a Java source code evaluator and a code profiler based on computational intelligence techniques. It is Java prototype software developed by AI Group [1] from the Research Laboratories at Universidad de Palermo: an Intelligent Java Analyzer (in Spanish: Analizador Java Inteligente, AJI). It represents a new approach to evaluate and identify inaccurate source code usage and transitively, the software product itself. The aim of this project is to provide the software development industry with a new tool to increase software quality by extending the value of source code metrics through computational intelligence.

Keywords: Software metrics, artificial intelligence, neural networks, clustering algorithms, expert systems

ADVANCES IN ARTIFICIAL INTELLIGENCE USING SPEECH RECOGNITION

¹Khaled M. Alhawiti¹Tabuk University, Tabuk, Saudi Arabia**Abstract:**

This research study aims to present a retrospective study about speech recognition systems and artificial intelligence. Speech recognition has become one of the widely used technologies, as it offers great opportunity to interact and communicate with automated machines. Precisely, it can be affirmed that speech recognition facilitates its users and helps them to perform their daily routine tasks, in a more convenient and effective manner. This research intends to present the illustration of recent technological advancements, which are associated with artificial intelligence. Recent researches have revealed the fact that speech recognition is found to be the utmost issue, which affects the decoding of speech. In order to overcome these issues, different statistical models were developed by the researchers. Some of the most prominent statistical models include acoustic model (AM), language model (LM), lexicon model, and hidden Markov models (HMM). The research will help in understanding all of these statistical models of speech recognition. Researchers have also formulated different decoding methods, which are being utilized for realistic decoding tasks and constrained artificial languages. These decoding methods include pattern recognition, acoustic phonetic, and artificial intelligence. It has been recognized that artificial intelligence is the most efficient and reliable methods, which are being used in speech recognition.

Keywords: Speech recognition, acoustic phonetic, artificial intelligence, Hidden Markov Models (HMM), statistical models of speech recognition, human machine performance.

EXPERIMENTAL SET-UP FOR INVESTIGATION OF FAULT DIAGNOSIS OF A CENTRIFUGAL PUMP

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Abstract:

Centrifugal pumps are complex machines which can experience different types of fault. Condition monitoring can be used in centrifugal pump fault detection through vibration analysis for mechanical and hydraulic forces. Vibration analysis methods have the potential to be combined with artificial intelligence systems where an automatic diagnostic method can be approached. An automatic fault diagnosis approach could be a good option to minimize human error and to provide a precise machine fault classification. This work aims to introduce an approach to centrifugal pump fault diagnosis based on artificial intelligence and genetic algorithm systems. An overview of the future works, research methodology and proposed experimental setup is presented and discussed. The expected results and outcomes based on the experimental work are illustrated.

Keywords: Centrifugal pump setup, vibration analysis, artificial intelligence, genetic algorithm.

APPLICATION OF ARTIFICIAL INTELLIGENCE TECHNIQUES FOR DISSOLVED GAS ANALYSIS OF TRANSFORMERS-A REVIEW

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Abstract:

The gases generated in oil filled transformers can be used for qualitative determination of incipient faults. The Dissolved Gas Analysis has been widely used by utilities throughout the world as the primarily diagnostic tool for transformer maintenance. In this paper, various Artificial Intelligence Techniques that have been used by the researchers in the past have been reviewed, some conclusions have been drawn and a sequential hybrid system has been proposed. The synergy of ANN and FIS can be a good solution for reliable results for predicting faults because one should not rely on a single technology when dealing with real-life applications.

Keywords: Dissolved Gas Analysis, Artificial Intelligence Techniques, Incipient Faults, Transformer Fault Diagnosis, and Hybrid Systems.