Agenda - Future Technologies Conference 2023
2-3 November 2023

FTC 2023

TIME (San Francisco) PDT/ UTC-7	Thu Nov 2	Fri Nov 3
09:00 AM - 09:30 AM	Delegates Check-in	Delegates Arrive
09:30 AM - 11:00 AM	Conference Opening + Keynote Talks • Tom Mitchell, Carnegie Mellon University • Derek Hoiem, University of Illinois	Day Opening + Keynote Talks • Flavio Villanustre, LexisNexis Risk Solutions • Sergei Gorlatch, University of Muenster
11:00 AM - 11:30 AM	Networking + Posters	Networking
11:30 AM - 12:30 PM	Paper Presentations	Paper Presentations
12:30 PM - 01:30 PM	Lunch	Lunch
01:30 PM - 03:30 PM	Paper Presentations	Paper Presentations
03:30 PM - 03:45 PM	Break	Break
03:45 PM - 05:15 PM	Paper Presentations	Paper Presentations
05:15 PM Onwards	San Francisco Bay Cruise	Conference Closing

SPONSORS AND PARTNERS:

SAI - THE SCIENCE AND INFORMATION ORGANIZATION

HPCC SYSTEMS™

Springer

FTC 2023 | Day 1 - November 2, 2023

Session 1: Deep Learning Nov 2 | 11:30 AM - 12:30 PM | Presidio Session Chair: Ramoni Lasisi	Session 2: Large language models (LLMs) Nov 2 | 11:30 AM - 12:30 PM | Amador Session Chair: Abraham Campbell
Enhancing Performance and Accuracy of Distributed Neural Networks with the Generalized Neural Network Bundle (Narayan Kandel) 378 - Voice Activity Detection using Convolutional Recurrent Neural Networks (Josafa de Jesus Aguiar Pontes) 214 - Machine Learning and Sustainability Metrics: Optimising Risk Assessment and Default Prediction (Md. Abu Sufian) 88 - Gaussian-Kernel Neutrosophic C-Means Clustering (Miin-Shen Yang)	189 - Phishing Faster: Implementing ChatGPT into Phishing Campaigns (Tyson Langford) 289 - A Use-Case for Implementing ChatGPT to Augment Teaching an Introductory Statistics Course (Jasdeep Pannu, Chris N Boosalis) 313 - Health Disparities Through Generative AI Models: A Comparison Study using Domain Specific Large Language Models (Yohn Jairo Parra Bautista) 14 - Which Semantics for Human-Machine Dialogue Systems? (Pierre-André Buvet, Abdelhadi Rouam, Bertrand Fache) 319 - Are You Aware That They Are Aware? Artificial Intelligence and Society (Dawid Zajac)

Session 3: Data Science Nov 2 | 01:30 PM - 03:30 PM | Presidio Session Chair: Ramoni Lasisi	Session 4: Ambient Intelligence Nov 2 | 01:30 PM - 03:30 PM | Amador Session Chair: Abraham Campbell
106 - Optimal Starting Parameters for Unsupervised Data Clustering and Cleaning in the Data Washing Machine (John R. Talburt) 140 - A Topological Data Analysis-based Approach to Object Localization: A Comparison with ViT and Yolov7 (Hong Cheng) 150 - Metabolic Adaptation in Hibernating American Black Bears (Myana Anderson) 152 - Utilizing Phonemes in Music Classification: Do They Matter? (Laurel Powell) 153 - In Consideration of Indigenous Data Sovereignty (Jennafer Shae Roberts) 291 - Security Protocols and Mechanisms for Sharing Near-Real-Time Environmental Data with Multiple Audiences during Disasters (Mustapha Awinsongya Yakubu) 130 - Exploring the Impact of Featured Images in News Stories using Machine Learning (Catherine Sotirakou) 198 - The Use of Smart Devices for Assessing the User's Physiological Status (Kristián Fodor)	205 - Sovereign Individual System (SIS): An Autonomous Digital Platform for Sovereign Individuals (Ying Liu) 320 - Optimizing Microgrid Energy Management Systems with Variable Renewable Energy Penetration: Analysis of Data Loss Effects (Saikat Das) 135 - ESP32: QEMU Emulation Within a Docker Container (Michael Howard) 108 - Harnessing Sheaf Theory for Enhanced Air Quality Monitoring (An Le) 184 - Carbon Storage Focused Reservoir Management: A Practical Example to Respond to Climate Change (Ganesh Thakur) 280 - Moved by B*Bots: Speculative Toy Fiction and Play with Future IoToys (Katriina Heljakka) 299 - Digital Twin of Wind Generator to Simulate Different Turbine Characteristics using IoT (Karolina Kudelina, Viktor Rjabtsikov) 86 - Designing an Experimental Setup for Introducing Industry 5.0 in a Smart Manufacturing Environment (Jeanne Coetzer)

Session 5: Computer Vision Nov 2 | 03:45 PM - 05:15 PM | Presidio Session Chair: Yohn Jairo Parra Bautista	Session 6: Robotics Nov 2 | 03:45 PM - 05:15 PM | Amador Session Chair: S M Mizanoor Rahman
131 - Examining Virtual Reality as an Alternative to In-Person and Online Learning Environments (Angela Murillo, Pranali Shinde) 99 - Climate Crisis in Virtual Environments (Abey Campbell) 156 - The Effects of Gender and Age-Progressed Avatars on Future Self-Continuity (Marian McDonnell) 197 - Deep Learning-based Vehicle Classification (Imran Shafiq Ahmad) 194 - OCRs for Extracting Characters from Ballots in the Process of Automating the Integrity Test in the Brazilian Elections (Jonas Silva) 401 - The Emotional Impact of Camera Techniques in Cinematic Virtual Reality: Examining Frame Shots and Angles (Zhiyuan Yu)	398 - Biomimetic and Psychophysical Investigations on Lifting Tasks for Developing Cooperative Reinforcement Learning Control of a Power Assist Robotic System (S M Mizanoor Rahman) 293 - Sim2Plan: Robot Motion Planning via Message Passing between Simulation and Reality (Yizhou Zhao) 399 - Optimizing Electric Power Efficiency in Power-Assisted Human-Robot Collaborative Manipulation of Objects (S M Mizanoor Rahman) 390 - On the Development of a Reconfigurable Platform for the Control of Multiple Collaborative Robots from a Software Engineering Perspective (Steffen Scholz) 315 - Bilateral Tele-operation of an Unmanned Aerial Vehicle: Teaching and Learning Priority (Richard Cumbicos)

FTC 2023 | Day 2 - November 3, 2023

Session 7: Agents and Multi-agent Systems Nov 3 | 11:30 AM - 12:30 PM | Presidio Session Chair: Abraham Campbell	Session 8: Communications Nov 3 | 11:30 AM - 12:30 PM | Amador Session Chair: Jizhou Tong
358 - Validating a New Collective Intelligence Technology for Accurate Ranking using Artificial Swarm Intelligence (Hans Schumann) 139 - An Agent-based Approach Toward Smart Software Testing (Fitzroy Nembhard) 138 - Idea Theory: Towards Logical Foundations of Intelligence Science (Ioachim Drugus) 188 - Modified AMBER Alerts System using TinyML Processing (Ahmad Al-Shami)	115 - Biologically Inspired Multi-Carrier Autoencoder Architectures for Communications (Irene Macaluso) 203 - Experimental Evaluation of 6 GHz Fixed Microwave Link Radio Receiver Performance (Benedict Isaac) 178 - Data Processing from VANETs to IoV: Literature Review (Assem Rezki) 367 - Low-cost Wireless MMG/Inertial-based Sensor for Hand Gesture Recognition (Luis Serpa-Andrade)

Session 9: Security	Session 10: e-Learning
Nov 3 | 01:30 PM - 03:30 PM | Presidio	Nov 3 | 01:30 PM - 03:30 PM | Amador
Session Chair: Jizhou Tong	Session Chair: S M Mizanoor Rahman

186 - Forensic Analysis of Contents in Thumbnails using Transfer Learning (Weifeng Xu)	102 - FazBoard: An AI-Educational Hybrid Teaching and Learning System (Fawzi Benmessaoud, Eliza Ash)
87 - Automatic Data Generation and Rule Creation for Network Scanning Tools (Veronica Rivas)	24 - Measurements of Class Design Quality (James Helfrich)
133 - An Implementation of Man-in-the-Browser Attack and Defense Method in the Google Chrome Browser (Jizhou Tong)	254 - Promoting Learners' Engagement to Maximize Learning in a Synchronous Online Workshop (Livinus Obiora Nweke)
377 - Cybersecurity Workforce Readiness Recommender System using NLP (Ramoni Lasisi)	128 - The Design and Development of Gamified Mixed Reality for Education with a Focus on the Implementation of Dental Morphology Application (Abey Campbell)
175 - Scan Me: QR Codes as Emerging Malware Delivery Mechanism (Tamirat Abegaz)	363 - NASA-TLX Based Workload Assessment of Learning Tasks for Primary School Children (Tandra Pal)
110 - A Controversial Study on Random Forest Accuracy for Attack Detection (Owezarski Philippe)	282 - Novel Delivery Model with the Combination of Iterative and Sequential Models (Patlolla Vijaya Vardhan Reddy)
347 - Formal Security Analysis of Generalized Ultralightweight Mutual Authentication Protocol (Umar M. Khokar)	

Session 11: Artificial Intelligence	Session 12: Computing
Nov 3 | 03:45 PM - 05:15 PM | Presidio	Nov 3 | 03:45 PM - 05:15 PM | Amador
Session Chair: Yohn Jairo Parra Bautista	Session Chair: Kohei Arai

192 - Sustainable AI - Standards, Current Practices and Recommendations (Shubhi Asthana, Sourav Mazumder)	355 - Quantum Optimized Centroid Initialization (Nicholas Allgood)
134 - AI in Retail Industry: Valuable Insights that Improve Profitability and Drive Growth (Wadnerson Boileau)	104 - Kube-Volttron: Rearchitecting the VOLTTRON Building Energy Management System for Cloud Native Deployment (James Kempf)
109 - Achieving Goals using Reward Shaping and Curriculum Learning (Mihai Anca)	55 - Optimizing Matrix Multiplication on NERSC's High Performance Computer Cori (Xuan Jiang)
170 - The Impact of Artificial Intelligence on Economy (Ashot Davoyan)	213 - Implementation of Sophisticated Image Insertion Function Voice-based Report Generator Application for the Visually Impaired (Yubin Ok)
349 - The Role of Ayushman Bharat Health Account (ABHA) in Telehealth (Sushila Paliwal)	15 - Usability Evaluation of Freelance Platforms (Zeeshan Haider Malik)