Faisal Jamil

Machine Learning Engineer · AI Specialist

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Education

Jeju National University (JNU) — *South Korea*

PhD. in Artificial Intelligence — *Sep. 2018 - Aug. 2021*

- Thesis Title: "Optimal Energy Trading Service and Resource Management based on SECaaS and AIoT in Smart Nanogrid"

University of Engineering and Technology — *Pakistan*

M.S. in Computer Science — *Sep. 2015 - Feb. 2018*

- Thesis Title: "Adoptive Thermal Aware Routing Protocol for Wireless Body Area Network"

Muhammad Ali Jinnah University(MAJU) — *Pakistan*

B.S. in Computer Science — *Sep. 2010 - Aug. 2014*

- Thesis Title: "Recommendation from Social Network For E-Learner"

Honors & Awards

2018-2021	**Presidential Medal**, For academic research excellence from 2018-2021	*Pakistan*
Ongoing	**Project Lead**, Developed Secure Threat Intelligence Sharing Platform funded by Innovation Funding Service (Project No: 10119325, £32,000)	*United Kingdom*
Ongoing	**Project Lead**, AI-Enabled Secure Remote Monitoring of Elderly funded by ERCIM (Project No: 931103251, £60,000)	*Norway*
Ongoing	**Global Talent Endorsement**, Endorsed by the Royal Society of Engineering UK	*United Kingdom*
Ongoing	**World's Top 2% Scientist**, Listed by Stanford University(Rank No: 136,748 out of 1,000,000)	*USA*
Ongoing	**Research Grant Award**, Secure Intelligent Energy Trading Model funded by Jeju National University (Project No: AD20186514, £5,000)	*South Korea*
2015-2018	**Government Scholarship**, Funded for Master Studies	*Pakistan*
Ongoing	**Editor**, Blockchain MDPI	*Switzerland*
2018	**Platinum Cup**, Achieved on MVA, Hosted by Microsoft	*Global*

Work Experience

University of Huddersfield — *Huddersfield, United Kingdom*

Researcher in AI and Data Analytics — *Mar. 2023 - Present*

- Led research grant proposals and mentored students on AI and machine learning, integrating advanced technologies like deep learning and NLP.
- Served as module leader for AI and Cybersecurity courses, providing hands-on experience and theoretical knowledge.
- Developed the Secure Threat Intelligence Sharing Platform (STISP) using Federated Learning and anomaly detection techniques.
- Implemented adversarial machine learning techniques to detect and mitigate malicious code in neural networks.
- Designed the IncepX-Ensemble Model for ethnicity recognition and face anonymization using deep learning models and YOLO variants.

Norwegian University of Science and Technology — *Norway*

Post-Doctoral Research Fellow — *Jun. 2022 - May. 2023*

- Developed AI-driven IoT solutions for smart city projects, including real-time data processing and predictive analytics.
- Led projects like gamified waste management using deep reinforcement learning and intelligent student evaluation systems using NLP.
- Integrated VR and AR for elderly care through a telepresence system and context-aware robots.

Big Data Research Center — *South Korea*

R&D Engineer — *Aug. 2018 - June-2022*

- Designed ML models integrated with IoT and blockchain for data security and predictive analysis.
- Developed blockchain-based electronic medical records for healthcare data integrity and security.
- Enhanced indoor navigation accuracy using ML algorithms for mission-critical IoT systems.
- Implemented peer-to-peer energy trading mechanisms for smart grids using blockchain and ML.

Capital University of Science and Technology *Pakistan*

Instructor ASP.NET (C) *Aug. 2015 - Aug. 2018*

- Taught ASP.NET Core, MVC framework, and Entity Framework, providing practical experience with web API development.
- Guided students on full-stack application development and integration of ML techniques using cloud platforms.

Microsoft *Pakistan*

Software Developer Microsoft (ASP.NET) *Aug. 2015 - Aug. 2018*

- Developed web and mobile applications using ASP.NET, integrating ML algorithms for intelligent features.
- Engaged in cloud-based solution development with Microsoft Azure, ensuring secure and scalable deployment.

Skills

Programming Languages	Python, PHP, C/C++, C#, Java, Android
Frameworks	MVVM, MVC, CakePHP, Hadoop, Laravel, OpenCV, PowerBI
Front-end Frameworks	JQuery, CSS3, HTML5, Bootstrap, AngularJS
Persistance	MySQL, PostgreSQL, NoSQL (Mongo DB)
CI/CD Tools	GitHub Actions, GitLab , Azure DevOps, AWS CodePipeline
MLOps	Azure Machine Learning (Azure ML)
Simulators	Mininet, Omnet++, ONOS, EdgeX Foundary
Operating Systems	Ubuntu, Debian, Raspbian, Windows.
Protocols	IEEE 802.11, HTTP, CoAP, MQTT, LoRA, TCP/IP
Tools	MATLAB/Simulink, Sublime Text, Pycharm, Komodo Edit, Visual Studio
Software Development	Software Development Lifecycle (SDLC), Agile Methodology
Misc.	Wireshark, Packet Tracer, MS Office, Git, Subversion, AWS Webservices

Leadership and Citizenship

2022	**Student Supervisor**, TEFT-Lab NTNU	*Norway*
Ongoing	**Module Leader**, Courses: AI, Cyber Security, and Distributed Ledger Technology	*United Kingdom*
Ongoing	**Supervision of Research Students**, Undergraduate and Postgraduate Programs	*United Kingdom*
2019-2021	**Korea-India Joint Research Funding**, Project: Secure Fitness Service based on IoT Blockchain Network	*South Korea*
2022-2023	**ERCIM Research Grant**, Digital Twins for Smart Healthcare Application	*Norway*
2024	**Innovation Funding Service Grant**, Project: Secure and Trusted Decentralized Platform for Threat Information Sharing	*United Kingdom*

Projects

Secure Threat Intelligence Sharing Platform (STISP) *Huddersfield, United Kingdom*

University of Huddersfield (UoH) *Mar. 2023 - Present*

- Developed a secure platform integrating Federated Learning and anomaly detection for real-time cyber threat detection and mitigation.
- Enhanced collective threat defense through swarm intelligence and proactive machine learning algorithms.
- Skills: Federated Learning, Cybersecurity, Anomaly Detection, Python

Detecting and Mitigating Malicious Code in Neural Networks

Huddersfield, United Kingdom

University of Huddersfield (UoH) *Mar. 2023 - Present*

- Applied adversarial training to detect and mitigate malicious code in neural networks, enhancing their robustness.
- Implemented robust optimization techniques for security in adversarial environments.
- Skills: Adversarial Machine Learning, TensorFlow, Keras, Cybersecurity

Intelligent Ethnicity Recognition and Face Anonymization

Huddersfield, United Kingdom

University of Huddersfield (UoH) *Mar. 2023 - Present*

- Developed the IncepX-Ensemble Model for ethnicity recognition using models like VGG16, ResNet-50, and YOLO variants.
- Implemented privacy-preserving face anonymization using hybrid techniques such as blurring and masking.
- Skills: VGG16, ResNet-50, MobileNet, YOLO, Privacy-Preserving AI

A Gamified Approach for Optimal Waste Management

Norway

Norwegian University of Science and Technology (NTNU) *Jun. 2022 - May. 2023*

- Developed a waste management system using deep reinforcement learning and IoT-Blockchain technology for smart cities.
- Encouraged citizen participation through gamification, improving waste collection efficiency.
- Skills: Deep Reinforcement Learning, IoT, Blockchain, Python

Intelligent Open-Ended Question Evaluation

Norway

Norwegian University of Science and Technology (NTNU) *Jun. 2022 - May. 2023*

- Built an AI model using NLP and optimization techniques to evaluate student exam answers with high accuracy.
- Used particle swarm optimization and gradient descent to fine-tune model parameters.
- Skills: Deep Neural Networks, NLP, Particle Swarm Optimization, Python

Intelligent Electronics Medical Records Based on Blockchain

Jeju, South Korea

Big Data Research Center, ETRI *Feb. 2019 - Aug. 2019*

- Implemented a blockchain-based system for securing electronic medical records with real-time anomaly detection.
- Utilized ML models (RNN, DNN) for predictive analytics in healthcare data.
- Skills: Blockchain, RNN, TensorFlow, Cryptography

Development of Inertial Navigation in Mission-Critical IoT Systems

Jeju, South Korea

Big Data Research Center, ETRI *Mar. 2020 - Jul. 2020*

- Enhanced indoor navigation accuracy using ML algorithms and IMUs in mission-critical IoT systems.
- Implemented Kalman Filters and neural networks for precise indoor positioning.
- Skills: Sensor Fusion, Kalman Filters, Neural Networks, MATLAB

Academic Library Event Data Analysis and Prediction

Jeju, South Korea

Big Data Center, Jeju National University *Mar. 2020 - Sep. 2020*

- Built predictive models using decision trees and gradient boosting for academic event analysis.
- Optimized resource allocation based on historical data and guided students in AI model development.
- Skills: Decision Trees, Gradient Boosting, Hadoop, Python

Development of Service Reference Model and Fitness Application Technology

Jeju, South Korea

Big Data Research Center, KETI *Sep. 2020 - Jan. 2021*

- Developed a fitness application using IoT and ML models for personalized health tracking with blockchain security.
- Integrated deep learning and logistic regression for health recommendations.
- Skills: Deep Learning, Logistic Regression, Blockchain, IoT

Peer-to-Peer Energy Trading Mechanism for Smart Grids

Jeju, South Korea

Big Data Research Center, ETRI *Sep. 2020 - Jan. 2021*

- Designed an energy trading platform using blockchain and ML algorithms for forecasting and optimization in smart grids.
- Implemented ARIMA and reinforcement learning models for accurate energy consumption prediction.
- Skills: Blockchain, Reinforcement Learning, ARIMA, Apache Spark

Publications

Research Contributions Overview

Global

Publication Statistics *As of 2023*

- Total Number of Citations: 2,643
- H-Index: 23
- I-10 Index: 40
- Cumulative Impact Factor (as per JCR, 2023): 170
- Google Scholar Profile: Google Scholar Link

References

Available upon request.