

SOFTWARE ARCHITECT · SECURITY EXPERT

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"Be the change that you want to see in the world."

# **Summary**

A versatile professional with extensive experience in software engineering, data analytics, and machine learning. Skilled in developing and optimizing scalable software solutions, building predictive models, and managing large datasets using big data technologies. Proficient in programming languages like Python, C++, and SQL, with hands-on expertise in deploying machine learning models and data-driven solutions for business intelligence. Passionate about leveraging technology to drive innovation and efficiency in diverse environments.

# **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 AloT 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 <b>Presidential Medal</b> , For academic research excellence from 2018-2021 <i>Pakis</i>		
Ongoing	<b>Project Lead</b> , Developed Secure Threat Intelligence Sharing Platform funded by Innovation Funding Service (Project No: 10119325, £32,000)	United Kingdom
Ongoing	<b>Project Lead</b> , Al-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	<b>Research Grant Award</b> , 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 NI P
- 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.

POST-DOCTORAL RESEARCH FELLOW

Jun. 2022 - May. 2023

- Developed Al-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

• Designed ML models integrated with IoT and blockchain for data security and predictive analysis.

- Designed blackship based electronic modical records for bealthorse data integrity and securify
- 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

United Kingdom

Aug. 2018 - June-2022

- 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

**R&D ENGINEER** 

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**

**Information Sharing** 

2024

2022 **Student Supervisor**, TEFT-Lab NTNU

Ongoing **Module Leader**, Courses: AI, Cyber Security, and Distributed Ledger Technology

Ongoing **Supervision of Research Students**, Undergraduate and Postgraduate Programs

2019-2021 **Korea-India Joint Research Funding**, Project: Secure Fitness Service based on IoT Blockchain Network

2022-2023 **ERCIM Research Grant**, Digital Twins for Smart Healthcare Application

Norway

Innovation Funding Service Grant, Project: Secure and Trusted Decentralized Platform for Threat

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#### 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 Al

### 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

### Telepresence System for Elderly Care

Norway

NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU)

Jun. 2022 - May. 2023

- Developed a telepresence platform integrating 360-degree VR and context-aware robots for elderly assistance.
- Enhanced interaction through immersive VR experiences and AR-based robot navigation.
- · Skills: Virtual Reality, Augmented Reality, Robotics, AI

### Intelligent Electronics Medical Records Based on Blockchain

Jeju, South Korea Feb. 2019 - Aug. 2019

BIG DATA RESEARCH CENTER, ETRI

- 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 Mar. 2020 - Jul. 2020

BIG DATA RESEARCH CENTER, ETRI

- · 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 Mar. 2020 - Sep. 2020

BIG DATA CENTER, JEJU NATIONAL UNIVERSITY

- 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

Dr. Faisal Jamil · Résumé OCTOBER 9, 2024



PUBLICATION STATISTICS

# **Research Contributions Overview**

Global

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.