Muhammad Fathi Fadlian

fathifadlian01@gmail.com | +44 7311124045 | linkedin.com/in/muhammad-fathi-fadlian
fathi-fadlian.netlify.app

EDUCATION

The University of Sheffield (UOS) **Sheffield, United Kingdom**
Master of Science, Data Science 2021 – Present

- **Honours**: Distinction/First Class Honour
- **Relevant Modules**: Machine Learning with Python I & II, Advance Python Programming, Data Mining, Big Data Analytics, Data Visualisation, Data Analysis, Research Methods, Database Design, Business Intelligence.

University of Indonesia (UI) **Jakarta, Indonesia**
Bachelor of Engineering, Electrical Engineering 2015 - 2019

- **Honours**: Upper Second-Class Honour (2:1)

WORK & LEADERSHIP EXPERIENCE

ZTE Corporation **Jakarta, Indonesia**
Data Scientist & Radio Access Network Engineer October 2019 – August 2021

- Created machine learning solutions for Indonesia's largest mobile telecom operator, totaling in $9 billion revenue in mobile telecom industry.
- Presented weekly and monthly reports to client's RAN engineering and planning team for capacity and coverage monitoring solutions.
- Project Experience:
  - ***Wireless Network Solutions and Planning***, Indonesia
    - Led development of comprehensive machine learning solution for deep coverage signal improvement for 4G network leading to 5% coverage increase in 6 months utilizing Python and MapInfo GIS.
    - Supervised development of comprehensive machine learning solution for capacity forecasting and site clustering for 2G, 3G, 4G, 5G network leading to 20% efficiency in capacity utilisation.
    - Developed document automation and ETL pipeline system using Python leading to 50% team's productivity increase.
    - Led Tableau visualisation project for 2G, 3G, 4G capacity, coverage, and solution weekly report.
  - ***Wireless Network Optimisation***, Indonesia
    - Developed data pipeline and visualisation for 2G, 3G, 4G capacity report leading to 25%-time efficiency.
    - Perform 4G Capacity monitoring.

Computational Intelligence and Intelligent Systems Group, UI **Jakarta, Indonesia**
Machine Learning Researcher & Lab Assistant January 2018 – August 2019

- Created machine learning systems and data pipeline for Cessna-172S cruise control and identification system using X-Plane aircraft modelling and simulation software.
- Led Team for deep learning research in developing LSTM models to achieve 89% accuracy in cruise control trajectory and identification system
- Published papers regarding aircraft identification system and cruise control using artificial neural networks, data acquisition for aircraft identification system and cruise control, and distillation column control system.

SKILLS & CERTIFICATIONS

Languages: English (IELTS Academic: 7.5, Full working proficiency), Indonesian (Native)
Programming Language: Python, R, SQL, HTML, CSS, C, Arduino
Machine Learning: Tensorflow, Scikit-Learn, KNIME, AWS Sagemaker, Keras
Spreadsheet and Reporting tools: Advance Microsoft Excel (Macro & VBA), Tableau, Power BI
Other Skills: MapInfo GIS, Database Design, ETL Process, Robotics, Circuit Design, Mechanical Design
Certifications & Training: Google Analytics Certification, AWS Cloud Practitioner, IBM Machine Learning, Artificial Intelligence Scholarship Course by KOMINFO.

Appendix

RESEARCH AND PROJECTS EXPERIENCE

Dating App Link Prediction using Graph Neural Networks

University of Sheffield, Fluttr Ltd. 05/2022 – 08/2022

Dissertation project in collaboration with Fluttr Ltd. to create a match prediction between Fluttr dating app users using Graph Neural Networks, Random Forest, MLP, and SVM utilizing profile features, topological features, and interaction patter that extracted from real-world dataset from the company.

Improvement of Linear Distillation Column Control Performance Using Fuzzy Self-Tuning Pi Controller

University of Indonesia 09/2018 – 09/2020

Results published in American Institute of Physics Conference Proceedings 2020. The purpose of the research was to improve PI Controller tuning method. The results showed improvement of the controller and system's response, robustness, and overall performance of the controller.

Data Acquisition of X-Plane's Aircraft through MATLAB for Neural Network Based Identification System

University of Indonesia 08/2018 – 09/2020

Project as part of my bachelor thesis and was presented in the International Tropical and Renewable Energy Conference 2020. Results published in American Institute of Physics Conference Proceedings 2021. The paper mainly discusses the detailed step-by-step of the data acquisition process. The results showed the real-time flight data such as altitude, attitude, and magnitude of the actuators.

Development of Open-Loop Control Systems for Cruise Control in Airplanes Using Artificial Neural Networks-Backpropagation and Flight Simulator Program Data Acquisition

University of Indonesia 08/2018 – 05/2019

Bachelor's Thesis Project, which includes the mentioned papers above as part of the research. The thesis mainly discussed the Neural Network architecture for system identification and cruise control part. The system identification and controller joined by the Direct Inverse Control method that will adjust the controller's output based on the plant's responses. The result showed the controller's ability to adjust its output value to affect the plant's flight parameters to reach the setpoints. although the results are good, it still requires improvement in the neural network architecture and communication between simulation programs.

AWARDS

LPDP Scholarship Awardee 2021-2022

Awardee of LPDP Indonesia Ministry of Finance Scholarship 2021, worth $75000 in tuition and stipends. Selected among PhD and Master student applicants from all over Indonesia with top 100 universities destination around the globe.

Outstanding Individual – ZTE Rising Star Onboarding Program

ZTE Corporation 12/2019

ZTE International onboarding program of new employees, conducted in ZTE University, Shenzhen, China, consisted of several activities, including training about its culture, business process, technical skills, and intrapersonal skills. Total of 30 new employees participated from various Asian countries. Awarded as an outstanding individual based on trainer's and mentor's assessment on several aspect, such as; core competent, leadership and initiative.

2nd winner in The International Process Control Competition 10/2018

Organized by Sepuluh Nopember Institute of Technology, Surabaya. Collaborated with student from Department of Chemical Engineering to solve and create a creative method to tune a PID Controller. Compete with teams from the undergraduate level and postgraduate level from universities across Southeast Asia.

2nd winner in Indonesia Robotics Contest (ABU Robocon Division) 06/2016

The Regional competition was organized by The ABU Asia-Pacific Robot Contest and Indonesia's Ministry of Research Technology and Higher Education. Thirtytwo teams from universities compete in renewable energy themed robotic competition to build two robots and accomplish specific tasks.