Reza Dwi Utomo

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Summary

As self-motivated data enthusiast with 4 years of varied experience, such as in independent research in intelligent control and RAMS (Reliability, Availability, Maintainability, and Safety) in manufacture, I found my experience and background have sufficient intersection with data science as both implement data-driven analysis, applied statistics, and artificial intelligence. I'm skilled in analytical programming, e.g. MATLAB, Python, and R, and eager to enhance proficiency in data analytics, data visualisation, and machine learning by attending a Bootcamp and doing self- learning on MOOC (Massive Open Online Course), e.g. Coursera, DataCamp, Udemy, edX, and Iykra.

Formal Education

MRes in Railway Systems Integration (upper division 2.1)
08/2016 - 09/2018

University of Birmingham, UK

Core modules: Mathematics as an Engineering Tool, Railway Operations and Control Systems, Railway Traction Systems Design, Railway Control Systems Engineering, Research Skills and Research Environment.

The thesis topic is to develop ATO (Automatic Train Operation) Control Systems with Kalman filter (developed in MATLAB) with a case study of Docklands Light Railway in London. A part of the thesis presented at the IEEE International Conference on Intelligent Rail Transportation (ICIRT) December 2018 in Singapore and published on IEEExplore.

BEng in Computer Engineering (GPA 3.22)
09/2010 - 08/2015

Diponegoro University

Core modules: artificial intelligence, fuzzy logic, neural networks, real-time operating system (RTOS), microprocessor design, embedded system and distributed embedded system.

Final project topic was to develop fuzzy logic controller (developed in MATLAB/Simulink) able to control transfer function of the train–published in IEEE Conference Proceedings.

Technical Skills

Skill	Level
Microsoft Office	●●●●○ Very good
MATLAB/Simulink	●●●●● Very good
Python	●●●●○ Very good
R	●●●●○ Very good
SQL	●●○○○ Intermediate
Git/GitHub	●●○○○ Intermediate
Linux (Ubuntu)	●●○○○ Intermediate
HTML	●○○○○ Basic

Key Skills

Problem solving
Effective communication
Teamwork
Interpersonal
Leadership
Analytical thinking
Adaptability

Personal Development

Machine Learning Specialization – Algoritma   **Accomplished 03/2020**

A specialization in Algoritma Bootcamp which teaches the implementation of machine learning methods, such as Linear Regression, Logistic Regression, K-Nearest Neighbours, Naïve Bayes, Decision Tree, Random Forest, Principal Component Analysis, K-Means Clustering, Exponential Smoothing, ARIMA/SARIMA, and Neural Networks.

IBM Data Science Professional Certificate – Coursera   **in progress**

Obtaining a financial aid from Coursera to enrol in this programme. There are 9 courses, i.e. what is data science, open source tools and libraries, methodology, Python, databases, SQL, data visualization, data analysis, IBM Cloud, and machine learning.

Python for Data Science and AI by IBM – Coursera   **Accomplished 02/2020**

One of courses in IBM Data Science Professional Certificate which teaches the use of Python for data science and artificial intelligence.

Data Visualization Specialization – Algoritma Bootcamp   **Accomplished 01/2020**

A specialization in Algoritma Bootcamp which teaches the programming for data science using RStudio, data visualization using R base plots and advanced plots, e.g. ggplot and leaflet, and intercactive plots and dynamic dashboard using plotly, flexdashboard, and Shiny dashboard.

Data Analyst with Python Career Track – DataCamp   **Accomplished 11/2019**

A career track with 16 courses (60 hours) focusing on data extraction, data cleaning, data visualization, and statistics using Python and SQL.

And many more.

Experience

Engineer Staff – PT Industri Kereta Api (Persero)   **02/2019 - 12/2019**
Indonesian Rolling Stock Manufacturer

- Assigned to develop a dedicated-for-INKA concept of work for RAMS analysis (Reliability, Availability, Maintainability and Safety) of the rolling stock system.
- As the main contributor for the development of RAMS management process at the company.
- Performing RAMS management Process using EN 50126.
- Performing reliability prediction analysis (developed in MATLAB) on passenger coach whose results are used as a base for managerial decision.

Junior Expert – Centre of Technology for Transport System and Infrastructure 05/2018 - 01/2019
Agency for the Assessment and Application of Technology (BPPT)

- Involved in the LRT Greater Jakarta project.
- Working in an engineering team collaborated with PT INKA.
- Performing RAMS (Reliability, Availability, Maintainability and Safety) analysis (e.g. FTA, FMEA, MTTR, MTBF, EN 50126) for the systems of doors, HVAC, bogie, wiring and piping connections, and control panels of the rolling stocks.
- Developing FTA (Fault Tree Analysis) in RStudio.

Apprentice – PT Citas Otis Elevator   **04/2016 - 07/2016**

- Worked as an apprentice at Service Field Department.
- Created official reports from the technical documentation.
- Assisted senior employees in their daily tasks.
- Helped to increase the customers' satisfaction.

Intern – Centre of Technology for Information & Communication Technology   11/2013 - 12/2013
Agency for the Assessment and Application of Technology (BPPT)

- Worked in an R&D-atmospheric environment which required a weekly progress presentation.
- Managed to have good communications with senior researchers.
- Developed a card reader to read specific data from a smart card based on HY-LPC1788-SDK.
- Applied the modules of the embedded system and RTOS.
- Program written in C++.
- My work was utilised for further developments in national ID cards.