Muhammad Dimas Hidayatullah bin Ikhsan

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Portfolio | GitHub

EDUCATION

University of Malaya **Kuala Lumpur**
Master of Data Science *October 2022 – November 2023*
- CGPA: 3.75/4.00
- Relevant Course: Principle Data Science, Data Analytics, Big Data Analytics, Big Data Management Data Mining, Numerical Optimization, Machine Learning.

University of Malaya **Kuala Lumpur**
Bachelor of Science in Physics *September 2018 – March 2022*
- CGPA: 3.69/4.00 MUET: Band 4
- Relevant Courses: Electronics, Thermal Physics, Quantum Mechanics, Numerical and Computational Physics, Plasma Physics, Mechanics, Cosmology and General relativity, Nuclear Physics, Particle Physics, Statistical Physics, Semiconductor, Modern Optics, and Laser Physics.

PROJECTS

Recomposing Classical Music Utilizing Generative Artificial Intelligence. *January 2024 – March 2024*
- Prepared, processed, and analyzed MIDI representation data of audio files for classical music.
- Built multiple generative models such as GAN, RNN, VAE, and GPT.
- Developed a fusion generative model by combining three generative models of RNN, VAE, and GAN.

Personalized Learning with Generative Artificial Intelligence. *March 2023 – September 2023*
- Prepared, processed, and analyzed educational data from educational platform MOOCCube.
- Built the GAN model and its variant (MDGAN, Multi-GAN, Multi-MDGAN) by customizing the GAN model.
- Compared the models with baseline models based on MAP, HR, MRR and NDCG metrics.
- Developed an educational recommendation system with various recommendation engines using Anvil.

Momentum Calibrations of Particles in the COMET Experiment. *August 2020 – December 2021*
- Simulated the COMET experiment phase-I experiment by using ICEDUST software implementing C++, Python, ROOT, and Linux.
- Gathered and analyzed the simulation data by selecting appropriate particles based on the physics interactions, processes, and characteristics of the particles.
- Customized the properties of the experiment based on the objectives and requirements of the subs experiment.

WORK EXPERIENCE

Nitori Furniture Malaysia **Kuala Lumpur**
Part-time: Sales Assistant *March 2023 – August 2023*
- Customer-facing; Attended and addressed 50+ customers' needs daily in a fast-paced working environment.
- Reconfigured the stock intake processes and inventory management to reduce up to 2 hours of labor.
- Reported and documented all damaged products using the appropriate procedure and paperwork.

National Centre for Particle Physics **Kuala Lumpur**
Intern: Physics Intern *July 2021 – September 2021*
- Analyzed ATLAS experimental data using Linux, C++, and CERN ROOT - Standard Model Higgs Boson Production in The Higgs Decay to Pair of W Boson in Two Leptons Final State.
- Developed tutorial modules using Jupyter Notebook based on ATLAS experimental data to introduce and teach particle physics data analysis to students.

SKILLS & LANGUAGES

Skills-Proficient: Python, Shell Scripting, Microsoft Office, SAS.

Skills-Competent: R, Apache (Hadoop, Spark, Hive, HBase, Pig), CERN ROOT, LATEX, Google Cloud Platform.

Skills-Advanced Beginner: C++, SQL, MongoDB, HTML, JavaScript, CSS, MATLAB.

Languages: Malay (*Native Speaker*), English (*Competent*)