

# Muhammad Dimas Hidayatullah bin Ikhsan

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## EDUCATION

### University of Malaya

*Master of Data Science*

**Kuala Lumpur**

*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

*Bachelor of Science in Physics*

**Kuala Lumpur**

*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 MOOCube.
- 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

*Part-time: Sales Assistant*

**Kuala Lumpur**

*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

*Intern: Physics Intern*

**Kuala Lumpur**

*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*)