Kevin Jonathan Kusnomo

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EDUCATION

Bachelor of Engineering in Information Engineering and Media ***Jul 2022 – Jun 2026 (expected)***
Nanyang Technological University, Singapore

- Cumulative GPA: 4.68/5.00
- Coursework: Intro to Data Science and Artificial Intelligence (IE0005), Object Oriented Programming (IM1003), Data Structures and Algorithms (IE2108), Designing and Developing Databases (BC2402), Discrete Mathematics (MH1812)

Virtual Training and Learning Development

- **Udemy**: (1) TensorFlow Developer Certificate in 2023: Zero to Mastery
- **Coursera**: (1) Machine Learning Specialization (2) Convolutional Neural Network (3) React Basics

PROJECTS

Image Compressor
K-Means based Image Colour Compression Model

- **Developed unsupervised learning algorithm** without any pre-existing library and framework, demonstrating understanding of algorithm flow
- **Compressed and visualized** images of different qualities through tensors manipulation

Medical Abstract Text Classifier
A TensorFlow natural language processing (NLP) project to categorize 5 sections of medical abstract sentences based on "PubMed 200k RCT: a Dataset for Sequential Sentence Classification in Medical Abstracts", Franck Dernoncourt, Ji Young Lee

- **Engineered custom features** from datasets to improve model's overall accuracy. Attained over 85% of accuracy against test dataset on best performing model
- **Constructed a multimodal model** by utilizing character vectorization, Universal Sentence Encoder (USE) pre-trained model, and sentence position
- **Built data pipeline** to transform complex dataset inputs into readable **Pandas** data frame
- **Employed machine learning library, scikit-learn,** to encode and vectorize input data, and equipped other models using **Multinomial Naïve Bayes** model as baseline

Bitcoin Price Prediction
An RNN-based bitcoin prediction model based on "N-BEATS: Neural basis expansion analysis for interpretable time series forecasting", Boris N. Oreshkin et al.

- **Implemented findings from research paper** using **Python Object Oriented Programming**, while re-experimenting with different neural network architectures to find optimal model
- **Generated model ensemble** by grouping similar models with different loss functions to achieve better overall performances

Food Recognition with Convolutional Neural Network (CNN)
CNN-based food classifier model based on "Food-101" Dataset

- **Demonstrated transfer learning, feature extraction, and fine-tuning techniques** on **EfficientNetB0** model across 101000 unique food images to achieve over 75% of accuracy
- **Designed an image augmentation model pipeline** to reduce model overfitting by modifying original images
- **Practised model checkpoint call-back** from **TensorFlow** to monitor and compare previously created models

CO-CURRICULAR ACTIVITIES

Technology Officer, PINTU (Pelajar Indonesia NTU) ***Sep 2022 – Aug 2023***

- **Collaborated within a 16-members team** to construct and maintain profile websites and an online shop by applying **HTML**, **CSS**, **JavaScript**, and **React.JS** to craft captivating user interfaces and seamless user experiences
- **Led a Beginner Web Development workshop** for Indonesian freshmen as a presenter of a team with 6 committee members.

Student Development Officer, Electrical and Electronic Engineering (EEE) Club ***Sep 2022 – Aug 2023***

- **Amplified educational and social experience** of EEE/IEM students through curated events to foster both social interaction and academic growth, such as Hackathon.
- **Cooperated actively with committees** from various portfolios to provide essential support for 2 EEE Club's flagship events

AWARDS & ACHIEVEMENTS

ASEAN Scholarship Awardee

- **Competed with high-achieving students from across ASEAN**, showcasing exceptional academic and extracurricular prowess

Bronze Medal, Indonesian Senior High School National Science Olympiad (Computing)

- **Showcased Competitive Programming** and **Algorithm Analysis** skills using **C++** language.
- Finished as one of the youngest medallists in the Olympiad.

SKILLS

Programming Languages: Python, C/C++, Java, JavaScript, MySQL
Machine Learning: TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, K-Means, Decision Trees, Regression, Classification
Software Development: React.Js, NodeJS, Express, MongoDB, Bootstrap