

UI OGINO

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Availability: Dec 2023 – Aug 2024

EDUCATION

National University of Singapore

Aug 2021 – May 2025

Bachelor of Engineering (Mechanical Engineering)

- Second Major in Data Analytics
- Modules taken: Data Structure and Algorithms, Introduction to Machine Learning, Programming Methodology, Probability, Convex Optimization, Mathematica Statistics

PROJECT

Hand Image Generation (GAN)

Aug 2023

- Built a Generative Adversarial Network model that generates images of hands
- Trained the GAN's generator and discriminator in alternating phases to produce fake images resembling a given dataset

Digit Segmentation (Image Segmentation)

July 2023 - Aug 2023

- Built a Fully Convolutional Network (FCN-8) to segment images of digits
- Attained an average Dice Score of 0.83 and IoU of 0.72 by hyperparameter tuning

BBC News Categorization(Natural Language Processing)

June 2023 - July 2023

- Built a Deep Neural Network with Embedding layer to categorize BBC news article into 5 different categories from the texts in the article using TensorFlow

Stock Prediction Model

Dec 2022 - Dec 2022

- Created a Stock Prediction Model to predict the Yahoo Japan stock movement in Python using 5-day, 25-day, and 50-day Simple Moving Average
- Performed Time Series Split Cross-Validation and Linear Regression to predict the stock movement and attained a Mean Squared Error of 288

WORK EXPERIENCE

Chope, Machine Learning Engineer Intern (Full-time)

May 2023 - Aug 2023

- Fine-tuned DistilBERT base model to perform Named-entity Recognition, classifying the search keyword into 4 different categories, cuisine, dish, location, and restaurant
- Achieved 0.99 accuracy and 0.98 f1 with validation data set (refer [here](#) for the model)
- Built a Docker image of the token-classification model and deployed it to Google Cloud Run, to classify new search keywords and add to a BigQuery table everyday
- Built a Tableau dashboard analyzing search trend and the keywords with highest Click Through Rate (CTR) and Conversion Rate (CVR), utilizing classified search data
- Created scheduled query, updating the Tableau dashboard table using Terraform
- Supported the Product Team by creating a Tableau dashboard analyzing the Chope's new Collections feature, analyzing the cuisine trend visualizing the change in number
- Tested the latency and the performance of the IMDA's recommendation system to integrate into the Chope app using Postman, and finding optimum dataset for training
- Deployed the recommendation system to the AWS EC2 server using Docker for UAT

Hogetic Lab, Data Scientist Intern (Full-time / Part-time)

Apr 2022 - May 2023

- Analyzed the root cause of underperforming products and drafted sales reports for a leading convenience store franchise chain in Japan
- Performed Time Series Analysis to predict the market size of a popular game app in the next 6 months utilizing Twitter data, using XGBoost and RNN (LSTM, GRU)

- Analyzed the correlation between sales of a product and the Likes of the promotion tweets, as well as the correlation between Likes of tweets on promotion tweets and normal tweets, using Python scikit learn and matplotlib
- Worked as an Intern Leader leading a group of interns to draft weekly sales prediction reports and developed a sales prediction tool utilizing Twitter data which received positive feedback from the client

Ensemblau Event and Marketing, Market Researcher

Dec 2020 - Jul 2021

- Analyzed consumer data of young Singaporeans using Microsoft Excel for a Japanese clothing retailer and employed data analysis and data visualization skills to contrast the difference in consumer behaviour between Singapore and Japan
- Cooperated with a Japanese client to develop a healthcare calculator for the US market and collaborated with researchers charged in other countries including Germany and France over a period of 3 months

COMPETITION

Digit Recognition (Kaggle)

July 2023

- Created neural network models (VGG, ResNet, Inception), consisting of CNN layers and DNN layers and built a custom callback function to avoid overfitting, in OOP
- Utilized Dropout, performed hyperparameter tuning improving the accuracy to 0.98

EXTRACURRICULAR ACTIVITIES

Technical Analyst (Machine Learning), NUS Fintech Society

Aug 2023 – Present

- Currently working on a project, building a gamma-gamma model and BG/NBD model to predict the Customer Lifetime Value, and deploying as web application using Streamlit

Vice Captain, Raffles Hall Sepak Takraw (NUS)

Aug 2021 – Aug 2023

- Built detailed game strategies to win in the annual Inter Hall Games as a team made of beginners, and received gold award for the contribution to Raffles Hall
- Reached semi-finals for the first time in Raffles Hall history at annual Intern-Hall Games

Event Director, Nihon Student Committee (NUS)

Aug 2021 - Present

- Directed Japanese cultural event for local students to introduce Japanese traditional festivals and games
- Planned and hosted webinars for Japanese high school students to familiarize NUS
- Created YouTube content with former president of Don Don Donki encouraging study abroad for Japanese students

CERTIFICATES

TensorFlow: Advanced Techniques (DeepLearning.AI)

Aug 2023

- Neural Style Transfer, Object Detection, Mask-RCNN, AlexNet, Variation AutoEncoder, Auto Encoder, GAN, FCN, U-Net, Distribution Strategies, GradientTape

TensorFlow Developer Professional Certificate (DeepLearning.AI)

July 2023

- Relevant Skills: TensorFlow, Natural Language Processing, Convolutional Neural Network, Recurrent Neural Network, Transfer Learning, LSTM, Image Recognition

Machine Learning Specialization (Stanford University, DeepLearning.AI)

July 2023

- Relevant Skills: Regression Analysis, Classification, Recommender, Reinforcement Learning, Decision Tree, Clustering, Random Forest, XGBoost, Anomaly Detection

SKILLS

- Languages: Japanese (Native), English (Native), Chinese (Intermediate), German (Intermediate)
- Software: Python, SQL, Tableau, Google Data Studio, Google Big Query, Java, R, MATLAB, Fusion360, SolidWorks, Microsoft Office Suite (Word, PowerPoint and Excel)