

# KIERAN HO CHENG HONG

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## EDUCATION

### NATIONAL UNIVERSITY OF SINGAPORE (NUS)

Aug 2023 - Present

#### **Bachelor of Science in Business Analytics (BZA), Honors**

Current GPA: 4.41/5.00, Specialising in Financial Analytics and Machine Learning

Background / Transfer: **Bachelor of Engineering in Computer Engineering (CE), Honors**

Relevant Coursework: Programming Methodology (A), OOP (A-), Mining Web Data for Analytics (BA) (A-), DSA (A+)

## PROJECT EXPERIENCE

### AMAZON ELECTRONICS RECOMMENDATION MODEL

Feb 2025 - Apr 2025

#### **Analysis and Prediction of Electronic Product Reviews**

- Recommendation system using Amazon Reviews 2023 dataset for personalised product recommendations
- Introduced sentiment-analysis pipeline, improving NDCG (normalized discounted cumulative gain) by ~31.4% from 0.5356 to 0.7041 and MAP (mean average precision) by ~53.7% from 0.4535 to 0.6973

### SINGLIFE FINANCIAL AGENT RECOMMENDATION MODEL

Jan 2025 - Feb 2025

#### **Predictive Model for Client-Agent Pairing**

- Machine learning model optimising client-agent pairing using 60,000+ data points
- Built using PyTorch, NumPy, and pandas, integrating batch normalisation, custom focal loss, and Exponential LR scheduling, achieving Precision@1 = 10.34%, Precision@3 = 16.01%, outperforming naive baseline by 800×

### TRAVLA

May 2024 - Apr 2025

#### **Mobile & Web-App Travel Planning Applications**

- Developed iOS & web-app travel planning apps using React Native Expo, Firebase, and Supabase

### AUTONOMOUS ROBOT

Oct 2023 - Nov 2023

#### **Custom Maze Navigating Robot**

- Autonomous robot built with base mBot kit with custom-built colour and infrared sensors from scratch
- Uses proportional-integral-derivative controller for turning and maintaining position for efficient turning with minimal overshoot, achieving no collisions and fastest completion time

### HANDWRITTEN DIGIT CLASSIFIER

Nov 2023

#### **K-Nearest Neighbours (KNN) Classification Model**

- Simple KNN handwritten digit classifier in C, trained and tested with MNIST dataset, 96.56% accuracy

## WORK EXPERIENCE

### SYNAPXE PTE LTD

Jun 2025 - Present

#### **AI & Cloud Engineering Intern**

- Supporting technical development deliverables on Health Empowerment thru Advanced Learning & Intelligent eXchange (HEALIX) using Tableau, Informatica, AWS Sagemaker and DataBricks

### NATIONAL UNIVERSITY OF SINGAPORE

Aug 2024 - Dec 2024

#### **Teaching Assistant (CS1010 Programming Methodology)**

- Taught programming fundamentals under contract, 4.7/5.0 for student feedback

## COMPETITIONS

- National AI Student Challenge 2025 - AWS LLM League Mar 2025 - Apr 2025
- NUS Datathon Advanced Category 2025 Feb 2025
- NUS Hack4Good 2025 Jan 2025
- NUS LifeHack 2024 June 2024
- NUS BitHacks 2024 Feb 2024

## SKILLS

Programming Languages	Java, Python, R, SQL, HTML, CSS, JavaScript, TypeScript, C, C++
Databases & Cloud	MySQL, Supabase, Firebase, AWS, Databricks
Frameworks / Libraries / Tools	PyTorch, NumPy, pandas, Next.js, Expo, Tableau, Git/GitHub, Vue