KIERAN HO CHENG HONG

Business Analytics Student | Financial Analytics & Machine Learning

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EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE (NUS)   Aug 2023 - Present

Bachelor of Science in Business Analytics (BZA), Honors

Current GPA: 4.48/5.00, Specialising in Financial Analytics and Machine Learning

Relevant Coursework:

- Programming Methodology (A), Object Oriented Programming (A-), Data Structures & Algorithms (A+)
- Data Management & Visualisation (MySQL & Tableau), Mining Web Data for Business Analytics (BA), Computational Methods for Business Applications, Application Systems Development for BA, Econometrics Modeling for BA

RAFFLES JUNIOR COLLEGE / RAFFLES INSTITUTION   Jan 2014 - Dec 2020

PROJECT EXPERIENCE

AMAZON ELECTRONICS RECOMMENDATION MODEL   Feb 2025 - Present

Analysis and Prediction of Electronic Product Reviews

- Developing a machine learning recommendation system using Amazon Reviews 2023 Electronics dataset to analyse consumer sentiment in order to generate personalised product recommendations

SINGLIFE FINANCIAL AGENT RECOMMENDATION MODEL   Jan 2025 - Present

Predictive Model for Client-Agent Pairing

- Developed a machine learning model optimising client-agent pairing to boost policy conversion rates for SingLife using 60,000+ data points, enhancing data-driven financial advisory services
- 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×

BEIJING INVESTMENT ANALYSIS   Aug 2024 - Nov 2024

Exploratory Data Analysis for Beijing's Real Estate Market

- Analysed historical housing transaction data in Beijing to examine price trends across districts to identify investment opportunities in Beijing's real estate market
- Identified specific housing configurations in Beijing's central districts and housing within underdeveloped suburban districts as candidates for highest investment potential due to expanding infrastructure and buyer preferences
- Conducted feature correlation analysis to identify key price determinants and utilised geospatial data in Tableau to create visualisations, revealing price patterns across both time and location

TRAVLA   May 2024 - July 2024

Mobile Travel Planning Application

- Developed a full-stack iOS travel planning app using React Native Expo, Firebase, and Supabase, enabling seamless real-time data sync and secure authentication, enhancing user accessibility and trip planning efficiency
- Designed and implemented custom UI elements and backgrounds in Adobe Photoshop, Canva and Figma, along with implementing Google Places and Place Autocomplete APIs to improve user experience

AUTONOMOUS ROBOT   Oct 2023 - Nov 2023

Custom Maze Navigating Robot

- Engineered autonomous robot using an mBot kit supplemented with additional sensors for coloured maze navigation to avoid collisions while performing turns dictated by detecting specific colours at maze junctions
- Applied proportional–integral–derivative controller for turning and maintaining position for efficient turning with minimal overshoot, achieving perfect score on all rubrics including speed, correction, turns and no collisions

HANDWRITTEN DIGIT CLASSIFIER   Nov 2023

K-Nearest Neighbours (KNN) Classification Model

- Built a KNN-based handwritten digit classifier using the MNIST dataset, achieving 96.56% accuracy through automated testing scripts and streamlined compilation

WORK EXPERIENCE

NATIONAL UNIVERSITY OF SINGAPORE Aug 2024 - Dec 2024
Teaching Assistant
- Enhanced students' proficiency in C programming by teaching weekly programming laboratory sessions for 10+ students; received 4.7/5.0 for student feedback, exceeding department and faculty averages
- Provided detailed, actionable feedback on 8 coding exercises, progressively guiding students from fundamental calculations to machine learning concepts while improving code quality and logic

AIR FORCE RECRUITMENT CENTRE (AFRC) Aug 2021 - Oct 2021
Administrative Assistant
- Managed administrative tasks including scheduling, query resolution, and contract processing for 50+ pilot candidates, utilising AFRC's integrated software and Microsoft Excel
- Streamlined administrative processes by overhauling documentation and creating standardised guides, reducing intern onboarding time and workload by 60%

COMPETITIONS

- NUS Datathon Advanced Category 2025 Feb 2025
- NUS Hack4Good 2025 Jan 2025
- NUS LifeHack 2024 June 2024
- NUS BitHacks 2024 Feb 2024

LEADERSHIP

- Kent Ridge Hall Committee Chair Aug 2024 - Present
- Organising Team - Operation Einstein May 2019 - Mar 2020
- Organising Team - International Service-Learning & Leadership Elective May 2019 - Dec 2019

SKILLS & INTERESTS

Programming Languages	Java, Python, R, SQL, HTML, CSS, JavaScript, TypeScript, C
Databases	MySQL, Supabase, Firebase
Frameworks / Libraries / Tools	PyTorch, NumPy, pandas, Next.js, Expo, Tableau, Git/GitHub
Languages	Fluent English, Chinese | Conversational Bahasa Indonesian | Basic Japanese
Interests	Blacksmithing, Travelling, Guitar, Film & Photography