BEI-JIA REBECCA LAI

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EDUCATION

Bachelor of Science

The University of Melbourne

Jan 2020 - Dec 2022

- Major: Computing and Software Systems, Weighted Average Mark: 87.375 (First Class Honours)
- Awards: Dean's Honours List (Top 3%) in 2021, Melbourne International Undergraduate Scholarship in 2022.
- Relevant Coursework: Algorithmic Trading, Artificial Intelligence, Computer Systems, Database Systems, Declarative Programming, Design of Algorithms, Foundations of FinTech, Investments, Machine Learning, Models of Computation, Object-Oriented Software Development, Probability, Software Modelling and Design

WORK EXPERIENCE

Computing Demonstrator The University of Melbourne Jul 2022 - Nov 2022

- Conducted weekly drop-in sessions for the Foundations of Computing course, introducing students to Python
- Assisted in marking mid-semester and final exams, providing accurate and constructive feedback to students

Programming Tutor

• Tutored a postgraduate student in C programming using a lesson plan tailored to their specific needs

PROJECTS

Recipe Book

- Led the development of the back-end system using Next.js, Firebase Authentication, and Cloud Firestore
- Collaborated with the front-end team to integrate the user interface and back-end functionality seamlessly
- Completed the project within three sprints using Agile methodology, meeting expectations and timelines

Trading Bot

Aug 2022 - Sep 2022

- Developed a trading bot in Python to optimize portfolio performance on the FlexEMarkets platform
- Automated trade executions for reactive and proactive portfolio management based on market conditions
- Utilized the FMClient library to interact with the platform and NumPy library for performance calculations

Game-Playing Agent

Apr 2022 - May 2022

- Designed and implemented an agent for the Cachex game in Python, achieving an average win rate of 85%
- Utilized the Minimax algorithm with Alpha-Beta pruning to optimize move exploration within the time limit
- Improved the agent's efficiency by introducing instant win/loss checks and a strategic move exploration order

Campus Navigator

- Built a web application using the Flask framework to display the optimal route on the campus map
- Utilized Dijkstra's algorithm to find the shortest path from the user's location to their desired destination
- Received a Scholarship in Technology (Top 3%) from the New Zealand Qualifications Authority in 2019

SKILLS

- Technical: Proficient in C and Python, Familiar with Haskell, Java, Prolog, and SQL
- Languages: Native proficiency in Mandarin Chinese, IELTS Academic Overall Band Score of 8.5 in English

Apr 2021 - Dec 2021

Aug 2022 - Oct 2022

Jul 2019 - Nov 2019