# Zhi Qi Lee

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#### **Technical Skills**

Programming Languages: Python, Java, Haskell, HTML/CSS, SQL, Dart, C++, Verilog

Framework and Libraries: PyTorch, Pandas, NumPy, Scikit-Learn, Matplotlib, Beautiful Soup, Selenium, Flutter

Database: PostgreSQL, MongoDB

Developer Tools: Git, Linux CLI, VS Code, Conda, Eclipse, Vim, Vivado, LaTeX, Isabelle

# **Education**

# The University of Edinburgh

Sep. 2018 - Nov. 2022

Bachelor of Science in Artificial Intelligence and Computer Science

Edinburgh, United Kingdom

- First-class Honours
- Relevant modules: Computational Logic, Functional Programming, Object-Oriented Programming, Software Engineering, Computer Systems, Algorithms and Data Structures, Applied Machine Learning, Database Systems, Text Technologies for Data Science

## Sunway College Johor Bahru

Jan. 2016 - Jun. 2017

Cambridge International A' Level

Johor Bahru, Malaysia

Computer Science (A), Mathematics (A), Accounting (A), Economics (A)

# **Projects**

## Computational Psychiatry in PTSD | Python, PyMC3

Sep. 2021 - Sep. 2022

- Searched and evaluated the available research papers about the computational psychiatric approach to PTSD
- Critical analysis and compared algorithmic models of PTSD
- Implemented the Rescorla-Wagner (RW) model from scratch
- Used hierarchical Bayesian model and Markov chain Monte Carlo (MCMC) sampling algorithm to fit the data simulated from the RW model

#### Mini database system | Java

Mar. 2022 - Apr. 2022

- Implemented a lightweight database system which supports operations such as scanning, selection, projection, join and aggregation for evaluating conjunctive queries with test-driven development (TDD) approach
- Implemented the minimisation procedure for conjunctive queries by using backtracking algorithm
- Implemented relational operators and built a query tree that is a tree of operators by applying object-oriented programming (OOP) concepts
- Scored 90 for this coursework where the maximum score is 100 and the average score is 64.6

# Boogle | MongoDB, PyMongo

Jan. 2022 - Mar. 2022

- Worked in a group of 6 to implement a live book content search engine, collaborated using Trello and Github
- Cleaned data scraped from websites
- Implemented tokenizer, stopword removal and porter stemmer for text pre-processing
- Designed the database schema and was responsible for work related to databases, such as the setup and maintenance of the database and implementation of the database accessor module

## News Search Engine | Python

Sep. 2021 - Oct. 2021

- Pre-processed a collection of news articles from the Financial Times
- Implemented boolean search, phrase search, proximity search and ranked information retrieval system by using the pre-processed texts

#### PAUL | HTML/CSS, Figma

Feb. 2021 - May. 2021

- Worked in a group of 8 to implement a UV disinfection robot, collaborated using Trello and Github
- Designed an accessible marketing website for the robot
- Designed and developed user interface for the user web app which allow remotely controlling of the robot

# Drone control Software | Java

- Oct. 2020 Dec. 2020
- Implemented a drone path planning program with test-driven development (TDD) approach
- Parsed the data that is collected from the web server and created data visualisation
- Applied object-oriented programming (OOP) concepts and effective Java practices such as immutability
- Wrote a report about the software architecture and the drone path planning algorithm with UML class diagrams
- Scored 90 for this coursework where the average score is 74.64 and the maximum score is 100

# Working Experiences

#### **Tutor & Marker & Demonstrator**

Sep. 2019 - Dec. 2020

School of Informatics, University of Edinburgh

Edinburgh, United Kingdom

- Worked as a teaching support team member for the Introduction to Computation course with over 450 students
- Marked formal assessments and provided constructive feedback
- Prepared for tutorials and assisted students in understanding the key concepts of course during tutorial sessions

Sales Manager

Sep. 2017 - Jun. 2018

Oh Honey Enterprise

Johor Bahru, Malaysia

- Formulated new sales strategies to support revenue growth
- Built and promoted long-lasting customer relationships by partnering with them and understanding their needs
- Organised trade show booth, including layout, set up and disassembling of equipment
- Trained junior sales staff
- Top seller in the team since the third month of doing this job and record maintained throughout the whole period

#### **Head Waitress & Cashier & Bookkeeper**

Jan. 2017 - Jun. 2017

Culture Street Cafe

Johor Bahru, Malaysia

- Addressed customer complaints about food service and aided restaurant manager in improving work procedures
- Took customers' orders, collected food orders from the kitchen and served them to customers
- Invoiced customers and paid vendors for their goods and services
- Handled closing duties such as restocking items and reconciling a cash drawer

#### Academic Awards

Volunteer

## Outstanding Cambridge Learner Awards 2017, Malaysia

achieved the highest marks in Malaysia in the first part of A' Level Computer Science

# **Extra-Curricular Experiences**

The Turing Trust

Jul. 2021 – Feb. 2022

Edinburgh, United Kingdom

- Tested the functionality of computers
- Wiped and refurbished computers
- · Packed computers that are destined for Africa

#### **Committee Member**

Sep. 2019 - Dec. 2020

sigCoin interest group of CompSoc

Edinburgh, United Kingdom

Hosted events on technical topics and other aspects of cryptocurrencies and blockchain technology

# Language Skills

Chinese (first language), English (fluent), Malay (fluent)