**Zhihan Zhang**

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**EDUCATION**

**The University of Sydney Sydney**, **Australia**

*BAC Computational Data Science Feb*. *2020–Feb*. *2023*

* WAM: 73/100
* Core Modules: *Calculus of One Variable (high distinction)*; *Data Science Capstone (distinction)*; *Introduction to Programming*; *Linear Algebra*; *Discrete Mathematics for Computation*; *Foundations of Data Science*; *Data Structures & Algorithms*; *Computing 2 Usability and Security*; *Data & Information Management*; *Agile Software Development Practices*; *Computing 3 Management*; *Introduction to Artificial Intelligence;*

**RESEARCH EXPERIENCE**

**Physics-Advanced Computing Major Joint Data Science Project Sydney**, **Australia**

*Team Leader Mar*. *2022–June 2022*

* For the final project of the *Data Science* course, worked with two physics students to develop a drumming program by Brainbox (a neuron detection instrument), using eyes to control music and beat; independently used Python to clean unnecessary data and classify the eye signals based on the visualised data trends; the finished model reached 80% accuracy in real-life simulations, and received a relatively high score of 76.
* Resolved cooperation problems for students from two disciplines, and organized brainstorming to propose innovative ideas to be adopted in the programming design.

**Multiple Linear Regression Data Analysis Project Sydney**, **Australia**

*Member Aug*. *2021–Nov*. *2021*

Collaborated with three partners to analyses the “Boston Housing Price” dataset using the R; wrote a final report to establish a multiple linear regression model for housing prices prediction using R Studio.

Independently cleaned and transformed multiple-sourced data sets, initially screened variables highly correlated with outcome variables through matrix heat map, maximized the model fit using backward selection and logarithmic transformation by R, and tested the fitted model for linearity, independence, homoscedasticity, and normality assumptions to determine the fitness of the model; the multiple r squared value which estimated the coefficient of determination is calculated as 0.586.

**Cybersecurity Project Sydney**, **Australia**

*Member Mar*. *2021–June 2021*

* For the *Cybersecurity* course project, collaborated with two partners to build a website and configure defences; Defensive and offensive teams worked together to develop a programming learning website with forums, passwords, and administrators, deployed the targeted website on a SSH-connected site with adding HTTPS, virtual users and APIs connected to a database.
* Responsible for front-end and testing work by using HTML and CSS to complete the design and implementation of web front-end; used Python to design virtual users to test the reliability of website functionality; used XSS, SQLI, CSRF techniques to successfully simulate attacks on other teams' websites.

**Agile Software Development Sydney**, **Australia**

*Product Owner , Develope member Mar*. *2021–June 2021*

* work with a Scrum team on developing a vending machine product using the Scrum method, Agile development tools including GitHub, gradle and Junit. We applied the Scum principles and these tools to build the software in Java. We also used the tools to implement CI/CD practices including Jenkins and GitHub.
* As a Product Owner, I took the responsibilities of producing and maintaining the Product Backlog, tracking the working progress, evaluating the speed, reflectig on the Sprints.

**Internship**

**PHOENIX International NGO Sydney**, **Australia**

*Intern*, *Media Operation Department Aug*.*2022–Present*

* Organized two NGO outreach events with over 1000 participants, managed a 500-people NGO WeChat community group, operated the WeChat public account by assisting in editing and updating articles.
* Assisted in administration work, including collecting, registering, and archiving NGO members' information.

**OTHER INFORMATION**

* Other activities: USU Student Union member (organised two orientation events and served in the volunteering team)
* Language skills: English (proficient), Mandarin (native)
* IT skills: Python (proficient with Pandas, Sklearn); SQL (proficient); R, Java, HTML, Shell; skilful in tools such as Jupyter Notebook, Pycharm, Git, RStudio, VSCode, Github, Shell, PostgreSQL, and Excel
* Hobbies: Calligraphy; Soccer (Middle School soccer team member); cooking