

Hao(Howard) Wang

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Skills

- Languages: Python, SQL, C/C++, Go, JavaScript, HTML/CSS, Shell, LaTeX
- Data Science & Analysis:
 - Libraries: Pandas, NumPy, scikit-learn, Spark, OpenCV, Matplotlib
 - Processing & Visualization: SQL, PLSQL, Matplotlib
 - Machine Learning Frameworks: scikit-learn
- Web Development: Flask, Bootstrap, node.js, React
- Other and Tools: Git, Unix/Linux, FastAPI, Jupyter Notebook

Experience

Casual Academic Tutor

UNSW

02/2023 - Current

- Actively engaged with and provided tailored assistance to a diverse and large student body, ranging from 400-900 registrants each semester, focusing primarily on intricate challenges of code debugging, optimization techniques, and in-depth algorithmic discussions.
- As the primary communication bridge between the student community and the leading course professor. Feedback and observations were instrumental in making real-time adjustments to teaching strategies, ensuring a dynamic and responsive learning environment.
- Collaborated closely with academic staff, actively participating in course planning sessions, and addressing individual student concerns, which culminated in enhancing the overall educational experience and fostering a climate of academic excellence.

Data Analyst

ReTo-Eco-Solution, Inc.

Haikou, China 03/2022 - 08/2022

- Managed and maintained the PLSQL database, ensuring the accuracy and completeness of data extraction.
- Conducted in-depth analyses of vehicle accidents and malfunction causes using data visualization techniques.
- Implemented automation via Python to dispatch tasks to partnering rescue organizations and to initiate claims with upstream insurance companies, significantly enhancing response times and operational efficiency..
- Regularly compiled monthly reports, providing detailed analyses on rescue vehicles, rescue pricing, and accident causes, offering data-driven insights for company decision-making.

Education

Master of Information Technology

UNSW

NSW, Australia 09/2022 – 09/2024

- Major in Artificial Intelligence and Database System
- Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Computer Vision, Extended Artificial Intelligence

Bachelor of Mathematics

University of Waterloo

ON, Canada 09/2016 - 12/2021

- Major in Mathematical studies
- Minor in Combinatorics and Optimization(C&O), and Pure Mathematic
- Relevant Coursework: Mathematical Logic, Number Theory, Group and Ring Theory, Real Analysis, Graph Theory, Discrete mathematics.

Projects

Kaggle Project(Group Project): Penguins vs Turtles

- The project takes YOLOv8 as a benchmark, focusing on improving the detection and classification functions of the Faster R-CNN model. This includes but is not limited to mosaic images, the idea of the combination of image segmentation and pattern recognition ideas, and the GrabCut algorithm, to some extent improving our model and results.
- Improved a compact model, benchmarked against YOLOv8, resulting in significant enhancements in evaluation metrics: Accuracy, Precision, Recall, and F1-score all exceeded 90%. Notably, with the integration of the Mosaic method, Precision reached 100%.
- <https://github.com/SsyHow/School-Computer-Vision-Project>

Data Analysis Project(School Project): Best Job Markets Considering Factors

- Create a data pipeline to analyze the data science job market, including crawling data from given web pages, cleaning and preprocessing the data, conducting an overview analysis of the job dataset.
- Creating a pivot table of average salaries by country and experience level, and visualizing the best job markets considering factors such as country, salary, and cost of living.
- <https://github.com/SsyHow/School-Project>

Others

- **LeetCode Weekly contest:** Scored 1805 in LeetCode Weekly Contest, placing in the top 7.4% of participants
<https://leetcode.com/haowang32123/>
- **Codeforces Portfolio:** My daily exercise page: <https://codeforces.com/profile/SsyHow>