Ting Wu

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EDUCATION

Northwestern University Sep 2023 - Dec 2024
M.S. in Engineering Science and Applied Mathematics Evanston, IL
GPA: 3.7 / 4.0
Main Courses: High Performance Scientific Computing, Numerical Solution of Partial Differential Equations, Machine Learning, Data Driven Methods for Dynamical Systems, Numerical Methods for Random Processes

University of Washington Sep 2019 - Jun 2023
B.A. in Mathematics Seattle, WA
GPA: 3.72 / 4.00 (Top 20% in the major)
Main Courses: Linear Algebra, Matrix Algebra, Probability and Statistics, JAVA Programming, MATLAB, Python Programming

TECHNICAL SKILLS

- **Programming:** Python (Proficient), JAVA (Proficient), MATLAB (High Level), R (High Level), C/C++ (Intermediate)
- **Data Analysis:** Microsoft Excel (Proficient), Tableau (High Level), SQL (Intermediate)
- **Languages:** Mandarin (Native), English (Proficient), Japanese (Intermediate)

PROJECT EXPERIENCE

Human vs AI Chess Game Mar 2024 - Jun 2024
Co-contributor Evanston, IL

- Designed, built, and trained **neural network** using Python extension libraries such as **pandas and numpy**, as well as machine learning libraries such as **PyTorch and TensorFlow** with a comprehensive parameters using historical game data.
- Applied **Monte Carlo Tree Search (MCTS)** algorithm and **Upper Confidence Bound for Trees (UCT) algorithm** using **Python** to simulate possible game states and allowed AI to select the most promising moves by evaluating the potential outcomes.
- Developed a **user-friendly interface** to enable human players to interact seamlessly with AI.

Multi-class Classification on Normal and Abnormal ECG Sep 2023 - Dec 2023
Co-contributor Evanston, IL

- Developed models of three dimensional datasets using Python extension libraries such as **pandas, numpy, wfdb, and ast**, and used **machine learning** libraries such as **scikit- learn and TensorFlow** to analyze the model.
- Trained the data models by machine learning and compared with **linear multi-class classification, Convolutional Neural Networks (CNN), and Recurrent Neural Networks (RNN)** in machine learning to compare the accuracy between the models.

Data Analysis of Factors Affecting Second-hand Car Prices Jan 2023 - Mar 2023
Co-contributor Seattle, WA

- **Merged, cleaned, and filtered two datasets** of more than 20,000 rows.
- Used **Python extension libraries** such as **pandas, numpy, seaborn, and matplotlib**, as well as **machine learning libraries** such as **scikit-learn** to analyze and model datasets.
- Trained the data models by **machine learning** and compared with **linear regression models** in machine learning to derive the average variance of the two, thus compared the accuracy between the models and finally presenting them in the form of graphs.

INTERNSHIP EXPERIENCE

Energy Internet Research Institute, Tsinghua University Jun 2023 - Aug 2023
Energy Data Analysis Intern Beijing, China

- Built a talent reserve database by utilizing **AppleScript**, **JavaScript**, and other programming languages to analyze, summarize and organize the data of more than 20,000 resumes of talents received by the Institute in the past six years, resulting in a reduction of resume review time from HR by approximately 50% and a significant improvement in work efficiency.
- Developed a program by using AppleScript that automatically downloaded all resumes and uploaded them to the online system, saving 30% of working time, around 6-7 hours.
- Analyzed and organized resumes to create a search engine, built a resume database with **MySQL**, and constructed knowledge graph using **Neo4j** as well as **Python** to correlate the resumes in the database to facilitate the retrieval of talents.
- Planned and prepared the **Conference on Integrated Industrial Energy Efficiency 2023** by arranging the conference venue and handling the distribution of conference materials.

eGMap Technology May 2021 - Aug 2021
Software Testing Intern Beijing, China

- Tested the software of **Beijing One Map Subsystem** approved by the Engineering Construction Projects project and XiangyangTraining Base Integrated Management Platform project.
- Organized and converted the **spatial and topographic GIS data** collected through aerial photography by drones and 3D laser scanning on the ground into **Python** language for analysis through the data management system developed by the company, while analyzed and compared the 3D data of the park collected to ensure the accuracy of the data and finally achieve the purpose of testing the software.
- Wrote several software test cases, completed system functional tests, prepared more than 10 documents including **system testreports and user manuals**, and all the tested systems have been put online and successfully completed the delivery.

HONORS & AWARDS

Annual Dean's List in University of Washington 2022 & 2023
Senior Mathematical Challenge: Gold Certificate 2019

ADDITIONAL INFORMATION

- Strong logical thinking ability, strong learning ability, can quickly get started on the work.
- Optimistic and cheerful, good at communicating with people, strong coordination and organizational skills and team spirit.
- Can bear hardship, strong anti-stress ability, and can adapt to different work environments.
- Love sports, good at soccer, basketball, fencing and other sports.