Michael Wu

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EDUCATION

University of California, Berkeley — Berkeley, CA
B.E. in Electrical Engineering and Computer Science, B.S. in Business Administration — *Aug 2021 - May 2024*
- **GPA**: 3.93
- **Relevant Coursework**: Algorithms, Data Structures, Computer Architecture, Machine Learning, AI, Data Science, Discrete Math, Probability and Statistics, Stochastic Processes, Multivariable Calculus

EXPERIENCE

Teaching Assistant (Tutor) - CS 61B, Data Structures — Aug. 2022 - Present
UC Berkeley EECS Department — *Berkeley, CA*
- Teach discussion sections and host office hours for Berkeley's Data Structures course (1500+ students)
- Record walk-through homework "getting started" and past exam walk through videos
- Design problems for labs, proofread discussion worksheets, and test-solve and grade exams

Research Assistant — Jan. 2023 - Present
Algorithms & Computing for Education (ACE) Lab — *Berkeley, CA*
- Work in a team of 4 to create computer-generation of questions to enable randomization of questions for exams
- Develop machine-gradable assessments that address learning goals which arise in typical CS courses
- Rigorously evaluate assessments using methods of HCI and education research through formal pilot studies

Co-Founder / CEO — Jul. 2022 - Aug. 2022
AirOver — *Porto, PT*
- Led an international team of 5 in creating a online travel agency that specialized in extended layovers so travelers can explore more cities for less cost as a part of the 2022 European Innovation Academy (EIA)
- Designed and developed flight search software and website from start to finish with 1000+ unique users
- Won the grand prize for EIA out of 500+ participants and invited to interview to join 500 Startups

PROJECTS

sleepy - | *Python, OpenCV* — July 2022
- Built a web application to map lecture slides to the corresponding timestamp in a recorded video
- Used OpenCV to image match between lecture slides and key frames from the video through SIFT
- Combined image processing, optical character recognition (OCR), and set matching to achieve 95% accuracy

Google Trends Stock Trader | *Python, Jupyter Notebook, FinRL* — July 2022
- Created a robot stock trader using the number of google searches as a key feature for reinforcement learning through OpenAI's Proximal Policy Optimization (PPO) algorithm
- Conducted hyperparameter optimization using Optuna and tested our agent in a trading environment using FinRL
- Observed consistent improvements in Sharpe ratio compared to a simple buy-and-hold strategy

Flight Search Software | *Python, HTML/CSS, JS, Flask* — July 2022
- Implemented a graph search heuristic algorithm to calculate optimal flight itineraries given cost, distance, etc.
- Used Kiwi's Multi-city Search API to find real flight tickets and prices for the generated itineraries
- Integrated the flight search to a frontend built in HTML, Bootstrap CSS, and Javascript using Flask

COMMUNITY & LEADERSHIP

Student Relations Officer — Nov. 2021 – Present
Eta Kappa Nu — EECS Honors Society — *Berkeley, CA*
- Develop curriculum and teach computer science at local underfunded high schools through weekly events
- Host weekly tutoring hours to 10+ students to help in various undergraduate EE/CS courses

TECHNICAL SKILLS

Advanced: Python, C++, C, Java, Jupyter Notebook, Git, Machine Learning, Statistics, NumPy, PyTorch, pandas
Familiar: HTML/CSS, JavaScript, SQL, R, Linux, Flask, OpenCV, REST APIs