Owen Fang

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EDUCATION

Virginia Polytechnic Institute and State University | Blacksburg, VA   **Expected May 2027**
Bachelor of Science in Computer Science and Mathematics

EXPERIENCE

Computer Science Honor Society – Chantilly, VA   **January 2022 – July 2025**
Computer Science Tutor and Mentor

- Tutored 60+ AP Computer Science students in Java and Python fundamentals, algorithms, and data structures.
- Created review materials and practice exams, improving student pass rates and confidence.
- Delivered monthly workshops on advanced algorithms to 20+ peers.
- Guided debugging sessions that improved troubleshooting efficiency.

Undergraduate Research - Blacksburg, VA   **August 2025**
DBWorkout

- Led full-stack design and development of a production-ready SQL practice platform for *100+ students*
- Ensured accessibility compliance with WCAG standards in UI/UX design
- Deployed application to https://dbworkout.cs.vt.edu for Fall course rollout and student testing
- Delivered a scalable system with automated grading, real-time feedback, and gamified leaderboards

YiFang Taiwanese Fruit Tea- Fairfax, VA   **May 2024 - August 2024**
Barista

- Prepared 100+ custom orders daily with 99% accuracy in a fast-paced environment.
- Maintained quality and speed under pressure while ensuring customer satisfaction.
- Shared Taiwanese tea culture with customers, strengthening communication skills.

PROJECTS

Swift App - Group Event Planner | SwiftUI, Firebase

- Integrated Firebase Firestore for real-time data storage and group-based availability syncing
- Implemented the MVVM architecture pattern, resulting in improved maintainability
- Designed a user-friendly and responsive UI using SwiftUI components, including custom date pickers
- Handled asynchronous Firestore reads/writes with error handling and state updates

Fantasy Football Web Scrapper | Python, BeautifulSoup, Requests, Pandas, SQLite

- Developed a Python web scraper to extract fantasy football stats and projections from Reddit and ESPN.
- Built a data pipeline to normalize and compare 10,000+ player records across weeks and seasons.
- Automated weekly email reports containing the Top 5 fantasy producers per position and performance trends, delivered to league members.

Restaurant Review Aspect-Based Sentiment Analysis | Python, ML, NLP

- Developed an ML pipeline analyzing 50K+ restaurant reviews across 5 aspects using BERT, Random Forest, and custom lexicon models
- Built an interactive Streamlit dashboard delivering real-time sentiment analytics to end users
- Achieved 85%+ classification accuracy and scaled processing to 5GB+ datasets with a modular Python architecture

TECHNICAL SKILLS

Languages: Python, Java, C++, SQL, JavaScript, Swift
Frameworks/Libraries: React, Node.js, Firebase, Pandas
Tools: Git, Excel