# Serena(Luyao) Wu

(917) 306-2853 | luyaowutech@gmail.com | LinkedIn: Luyaowu001 | New York

## Education

**Master of Computer and Information Technology**                    Philadelphia, PA
*University of Pennsylvania, School of Engineering and Applied Science*    *Aug. 2024 – May. 2026*
Courses: Data Structures & Software Design, Algorithms & Computation, Computer and Network Security, Computer
Systems, Software Analysis, Big Data Analytics, Applied Machine Learning    GPA: 3.90/4.00
**Bachelor of Science in Direct and Interactive Marketing**                New York, NY
*State University of New York*                                *Aug. 2016 – May. 2020*

## Skills

**Programming:** Java, Python, C/C++, JavaScript, Swift, SQL, HTML/CSS, ARM Assembly
**Frameworks/Tools:** AWS, Docker, Node.js, MongoDB, Pandas, NumPy, Hugging Face, Tableau, Power BI
**Concepts:** Algorithm Design, AI/ML Systems, Full-Stack Development, OOP, Data Modeling

## Work Experience

**Baozun Inc. (Nasdaq: BZUN)**                                *Shanghai, China*
*Data Analyst*                                            *Jan. 2021 – Feb. 2023*
- Developed data-driven targeting strategies by analyzing e-commerce user profile data to identify high-potential customer segments for targeted brand.
- Implemented advanced segmentation techniques using K-Means Clustering and Random Forest to categorize users based on purchasing behavior, demographics, and browsing patterns.
- Predicted conversion likelihood through Linear Regression and RFM (Recency, Frequency, Monetary) modeling, optimizing customer lifetime value estimation.
- Designed and executed A/B tests, leading to a 12.5% improvement in Return on Advertiser Spend (ROAS) over the platform's baseline recommendations.

## Software Experience

**Othello: AI Strategy Game (Java, JavaFX, JUnit)**          Github page: tinyurl.com/othelledemo
- Engineered an AI-driven Othello game featuring Minimax with Alpha-Beta pruning, Monte Carlo Tree Search (MCTS), and a custom Randomized Negamax algorithm, attaining an 85%-win rate against human players.
- Developed a JavaFX-based GUI with three dynamic game modes (PvP, PvE, AI vs AI), styled with CSS and enhanced with a 30-second countdown timer to simulate time-pressured decision-making.
- Achieved 85% JUnit test coverage, verifying over 2,000 unique board states for accuracy in disc-flipping logic, move validation, and AI behavior.

**Multi-Threaded HTTP Server & Search Engine (C++/POSIX)**     Github page: tinyurl.com/cit5950Server
- Engineered a high-performance multi-threaded HTTP server using C++ and POSIX sockets, leveraging a thread pool architecture to concurrently handle 100+ client requests with <500ms latency.
- Designed a file crawler to parse and index 10,000+ documents using TF-IDF scoring, enabling real-time keyword search via HTTP GET requests (e.g., /search?query=data+science).
- Integrated Valgrind for memory leak detection and Catch2 for unit testing, achieving 95% test coverage across 2,000+ test cases for request parsing, response generation, and concurrency safety.

**WeMeditate: AI Mindfulness App (Swift/ SwiftUI)**          Demo video: tinyurl.com/WeMeditated
- Designed an iOS app that delivers guided meditations using OpenAI GPT for real-time mindfulness coaching.
- Built a seamless and immersive UI with SwiftUI, incorporating interactive animations, transitions, and audio playback features to elevate user experience.
- Integrated AI-driven conversational logic to tailor meditative guidance based on mood, stress levels, and time.

## ACTIVITIES

**Wharton Global Youth Program Application Reviewer:** Evaluated 700+ applications for competitive data science programs; refined judgment in identifying technical potential and academic fit.
**SUNY Library Lab Monitor:** Helped students resolve software issues; enhanced skill in translating complex technical issues into clear, accessible explanations.