

Serena(Luyao) Wu

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LinkedIn: linkedin.com/in/Luyaowu001 | Portfolio: serena6688.github.io/serenaintech

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)

Project Demo: tinyurl.com/othellegame

- 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 95% JUnit test coverage thoroughly validating board logic, legal moves, and AI behavior across diverse game scenarios.

Multi-Threaded HTTP Server & Search Engine (C++/POSIX)

Project Demo: tinyurl.com/httpservercpp

- Engineered a high-performance multi-threaded HTTP server using C++ and POSIX sockets, leveraging a thread pool architecture to concurrently handle 20+ client requests with <500ms latency.
- Designed and implemented a file crawler to parse and index 100+ documents with TF-IDF, enabling real-time keyword search via HTTP GET endpoints (e.g., /search?query=hello+world).
- Ensured 85% code coverage across core server logic using Catch2; applied Valgrind to detect memory leaks.

WeMeditate: AI Mindfulness App (Swift/ SwiftUI)

Project Demo: tinyurl.com/wemeditateapp

- 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.