

LIDIANN SPEARS

(213) 423-9514 | lspearsguerra@gmail.com | LinkedIn: linkedin.com/in/lidiannspearsguerra/ | GitHub: github.com/lidiann

EDUCATION

Northwestern University

B.A. in Computer Science & Mathematics

Evanston, IL

June 2028

- **Coursework:** MENU: Intensive Linear Algebra & Multivariable Calculus, Fundamentals of Computer Programming Sequence, Data Structures and Algorithms, Discrete Mathematics
- **Honors/Awards:** Questbridge National College Match Scholarship Recipient, Thrive Scholar
- **Societies:** Society of Women Engineers, Society of Hispanic Professional Engineers, Association for Women in Mathematics

WORK EXPERIENCE

Northwestern University, Mathematics Department

Teaching Assistant for Math 228-1: *Multivariable Differential Calculus for Engineering*

Evanston, IL

September 2025 – Present

- Led weekly discussion sections, held office hours, and graded quizzes and exams for 300+ students in Multivariable Calculus, coordinating with faculty to support course delivery.

Jane Street, Jane Street Summer Immersion Program

Software Engineering Fellow

New York, NY

June 2025 – August 2025

- 1 of 12 nationally selected to work under the mentorship of Jane Street engineers in an 8-week intensive fellowship.
- Applied industry-standard SWE practices including code review, modular design, and design documentation.
- Implemented projects such as image manipulation, web scraping, RPCs, building Gomoku AI, and a trading bot that tracked exchange state and executed real-time trades using market making and arbitrage strategies across ETFs, ADRs, and bonds.

Jane Street, Academy of Mathematics and Programming

Student

New York, NY

June 2024 – August 2024

- Completed intensive courses in CS, combinatorics, and number theory, and applied these skills to design efficient algorithms, including a probabilistic, optimal-move-suggestion bot for Camel Up.

PROJECTS

Eden - AI Sustainability Tracker Chrome Extension

September 2025

Tools: React, TypeScript, Tailwind, JSON, FastAPI, PostgreSQL, Claude API, Git, Render, CORS & origins

- Built a Chrome extension (React, TypeScript, Tailwind) to track environmental metrics for Claude.ai, using a FastAPI backend for impact computation.
- Utilized real-time token counting, background scripts, and dynamic UI injection to monitor user activity and display live data.

Qotes - Social Media Website

June 2025 – August 2025

Tools: OCaml, CSS, Figma, Bonsai, Async

- Developed a social media platform in OCaml (Bonsai, Async) with a reactive UI synced via RPCs over WebSocket, featuring auth, posts, and friend requests.
- Implemented a 3D hyperbolic graph visualization for spatial social network exploration, replacing a traditional feed.

Real-Time Campus Transit Navigator

April 2025

Tools: C++, Object-Oriented Programming (OOP), REST API, JSON, CURL, Git

- Developed a C++ application that integrates static OpenStreetMap data (parsing 15,000+ nodes) with live CTA bus tracking.
- Integrated the real-time CTA Bus Tracker API using the CURL library, fetching and parsing complex JSON responses to display live bus arrival predictions.

LEADERSHIP

Association for Women in Mathematics, Northwestern Student Chapter

Evanston, IL

Co-Leader

October 2025 – Present

- Revived the university's dormant AWM chapter, securing faculty sponsorship and growing membership to 40+ in the first month through a multi-departmental outreach campaign.
- Developing a year-long program including technical workshops, alumni panels, and faculty networking.

SKILLS

Programming Languages: Python, C++/C, OCaml, JavaScript/TypeScript, HTML/CSS, SQL, Racket, Java

Technologies & Tools: React.js, FastAPI, Tailwind, REST APIs, NumPy, Pandas, BeautifulSoup, Git, Render, Bash, Figma, LaTeX