

ETHAN ZHANG

(781)-570-6886 | ez2450@columbia.edu | [linkedin.com/in/ez24](https://www.linkedin.com/in/ez24) | github.com/etzhang24

EDUCATION

Columbia University, School of Engineering

New York, NY

B.S. in Computer Science – 3.6 / 4.0

Aug. 2024 – May 2028

- **Relevant Coursework:** Analysis of Algorithms, Data Structures, Advanced Programming (C/Unix), Fundamentals of Computer Systems, Introduction to Databases, Discrete Mathematics, Linear Algebra, Probability

WORK EXPERIENCE

Software Engineering Intern

Jun. 2026 – Aug. 2026

Corning Incorporated

Shanghai, China

- Developed an optimization algorithm for Corning's fiber-optic manufacturing process by modeling the heating process, reducing startup time by 2 minutes and projecting over \$300K in annual savings.
- Developed a Google OR-Tools CP-SAT constraint-solving system to automate fiber-optic spool selection, reducing planning time from 30 minutes to under 30 seconds while cutting material waste by 1.5%.

Co-Founder & Technical Lead

Oct. 2025 – Present

Columbia Software Solutions

New York, NY

- Scaled a pro-bono software club to 50 engineers across 14 projects, building software that has impacted 8,000+ New Yorkers
- Lead technical direction across project teams by standardizing the stack (Next.js, Supabase, PostgreSQL, Vercel CI/CD), enforcing code reviews, and contributing production code across projects

Business Development Intern

Sep. 2025 – Dec. 2025

Series.so

New York, NY

- Built Python web-scraping and enrichment pipelines that qualified 500+ sales leads, boosting outreach efficiency by 40%

Automation / Workflow Optimization Consultant

Jul. 2025 – Aug. 2025

Linx USA Consulting

Dover, NH

- Automated tax processing pipeline for 250+ clients using JotForm, Zapier, and Dropbox APIs, cutting manual work by 80%
- Engineered secure PDF merging system that reduced document prep time from 3 hours to 15 minutes per client

Research Assistant – Robotics & Multi-Agent Systems

Jun. 2023 – Aug. 2023

University of New Hampshire

Durham, NH

- Engineered distributed coordination system in C and Python for event-triggered consensus across 5+ robotic agents
- Implemented Node.js server for real-time communication between robotic agents, achieving 95% coordination accuracy

PROJECTS

Refettorio Harlem – Food Rescue Automation | Node.js, Twilio, Google Sheets API, Vercel

Jan. 2026 – Present

- Built a WhatsApp logging pipeline that automates tracking of 800+ meals served weekly across the Harlem community
- Hardened it for daily kitchen use with message validation, error handling, and automatic retries

Columbia Swipe Market | Flask, PostgreSQL, Google OAuth, Gmail API, Render

Feb. 2026 – Present

- Scaling Columbia's only meal-swipe marketplace with 2,100+ listings, 1,200+ buyer-seller matches, and \$8,000+ transacted

Columbia Robotics – AQUAS | TypeScript, React, MapLibre GL, MQTT, PostgreSQL

Sep. 2025 – Present

- Architected robot-to-cloud data pipeline using MQTT and PostgreSQL to stream sensor telemetry for remote monitoring
- Developing satellite-driven pathfinding algorithms to autonomously detect and target harmful algal blooms in real time
- Building geospatial dashboard in React with heatmaps, time-animated tracking, and multi-robot comparison views

Santa's Knights – Full Stack Platform Rebuild | Next.js, Supabase, Vercel, TypeScript

May 2026 – Present

- Rebuilt a Harlem nonprofit's rented Wix site as an owned Next.js/Supabase platform with auth, database, and CI/CD on Vercel
- Built a gamified XP training tracker and a nationwide "Santa's Letters" gifting portal as two core member-facing modules

NYC Mesh Inventory TNG | Django, PostgreSQL, Python

Aug. 2026 – Present

- Contributing backend functionality to NYC Mesh's Django/PostgreSQL inventory management platform by implementing REST APIs, designing database models, and building inventory management workflows.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C, SQL, Bash

Frameworks / Libraries: Django, React, Next.js, Node.js, Flask, OR-Tools (CP-SAT), pandas, NumPy, scikit-learn

Tools / Platforms: PostgreSQL, Supabase, Docker, Git, GitHub Actions, Vercel, Linux/Unix, REST APIs, MQTT