Bowen Cheng

Chicago, IL | bowencheng@u.northwestern.edu | 773.943.0056 | [Linkedin](#) | [Github](#) | [Website](#)

EDUCATION

Northwestern University | Evanston, IL   September 2023 – June 2027
- Pursuing B.S./M.S. in Computer Science; GPA: **3.99/4.0**
- Coursework: Distributed Systems, OS, Networking, Databases, ML, Computer Security Systems, Probability, DSA

EXPERIENCE

Medline Industries | Northfield, IL   June 2025 – Present
Software Development Intern
- Building Python-based voice agent pipeline using Azure STT/TTS, GPT, and RAG over Azure AI Search to prototype generative AI system that understands IT Helpdesk requests and reduces manual routing latency

Aqualab | Evanston, IL   March 2025 – June 2025
Undergraduate Research Assistant
- Architected and deployed Splashv2, fully reproducible, config-driven traceroute ingestion pipeline with Dagster, Docker Compose, ClickHouse, and Grafana, reducing researcher setup time from days to under one hour
- Enabled scalable ingestion, processing, and annotation of 1.6M+ RIPE Atlas traceroutes with IPInfo enrichment
- Accelerated traceroute geolocation by 86% through multi-core parallelization and optimized data workflows

Prescience Lab | Evanston, IL   March 2025 – June 2025
Undergraduate Research Assistant
- Implemented localization functionality for peer-to-peer platform for privacy-preserving sensor data processing
- Parsed UWB sensor output into (x, y, z) coordinates and broadcast locations over libp2p for user tracking

Northwestern Institute on Complex Systems | Evanston, IL   Dec. 2024 – June 2025
Undergraduate Research Assistant
- Engineered low-latency LED control system in C to study coupled oscillators in firefly populations, integrating laptop, Raspberry Pi, and addressable LEDs to enable precise, real-time dynamic lighting sequences
- Designed data pipeline from laptop to Raspberry Pi via UDP over Ethernet cable, achieving sub-5ms latency

Northwestern Wildhacks | Evanston, IL   June 2024 – May 2025
Corporate Engagement Member
- Collaborated with 4-person team to raise $9,500+ from multiple sponsors for Northwestern's largest hackathon

GHY Impact Capital | Evanston, IL   July 2024 – Sept. 2024
Software Engineering Intern
- Created AI-powered tool that extracts Jira tickets from Git commits and auto-generates release notes across repos
- Automated Aurora database backup checks with Python, Boto3, and GitHub Actions to ensure snapshot integrity

PROJECTS

Pokefantasia | AWS, Docker, HTML/CSS, Javascript   Dec. 2024
- Built full-stack web application with serverless backend architecture, enabling users to upload JPEG images for Pokemon type classification, type transformations, or style transformation, generating customized outputs
- Trained and deployed custom Vision Transformer model on Google Colab to AWS for image classification
- Deployed API endpoints using AWS API Gateway, leveraging Lambda for distributed computation, S3 for image storage, RDS for managing user data, and ECR for dependency management

TECHNICAL SKILLS

- Languages: Python, C, C++, Java, SQL, HTML/CSS, Racket, TypeScript, Rust, Go
- Frameworks: React, Node.js, pandas, NumPy, Matplotlib, OpenCV, Tailwind CSS, Dagster
- Developer Tools: Git, AWS, VS Code, GitHub Actions, Docker
- Interests: Competitive Mathematics, Violin, Chess