Ashmit Deb

linkedin.com/in/ashmit-deb | ashmitdeb.com
734-883-1390 • ashmitd@umich.edu

EDUCATION

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**
Bachelor of Science in Computer Science + Minor in Entrepreneurship Aug. 2023 – May 2027

Cumulative GPA: 3.4/4.0

Extracurriculars: Michigan Financial and Math Society (MFAMS) & MHackers

EXPERIENCE

SIGRAY **Benicia, CA**
Software Engineer Intern May 2025 – Aug. 2025

- Enhanced feature development in Python/.NET spectral-analysis modules and Selenium/NUnit tests for Sigray's AttoMap micro-XRF boosting feature delivery and CI/CD validation via Azure (AKS) & Jenkins (API + GUI).
- Integrated ML-based spectral decomposition & ROI clustering by implementing k-means notebooks in Jupyter thereby embedding automated mineral-phase segmentation directly into the analysis pipeline.
- Built a REST Node.js microservice on AWS (EC2) to stream real-time scanned AttoMap data to a Vue.js dashboard and trimmed WPF/MVVM bindings cutting preview latency 30% via telemetry-driven tuning.

BLUE CROSS BLUE SHIELD OF MICHIGAN **Detroit, MI**
Software Engineer Intern May 2024 – Aug. 2024

- Developed Python and SQL-driven ETL pipelines that ingested 10K+ claims records daily integrating GitHub Actions to cut release lead-time by 40% and shrink data-latency over 75% through incremental loads.
- Designed and tuned MySQL schemas in AWS (RDS) added unit-tested queries and SharePoint-based validation dashboards boosting data integrity and automated schema migrations for repeatable zero downtime releases.
- Expanded BCBSM's IOS/Android membership app by improving the eligibility/benefits-lookup feature and 15+ bug fixes in two Agile sprints wiring the React Native UI through Firebase to a Java Spring Boot backend.

UNIVERSITY OF MICHIGAN - EECS DEPARTMENT **Ann Arbor, MI**
Electrical Engineering Intern June 2023 – Aug. 2023

- Collaborated with Professor Amir Mortazawi's postgraduate research team at the University of Michigan developing a wireless power transmission system while utilizing amplitude modulation frequency.
- Operated different analog circuit simulators including LTspice while working hands on with RLC circuits and converting 1 MHz radio waves into an AC voltage source for high-efficiency bench prototypes.
- Ran vector network analyzer sweeps and tuned impedance-matching networks boosting wireless-link efficiency.

PROJECTS

Reddit API Stock Analyzer Jan. 2025 – Feb. 2025

- Developed a multithreaded C++ app that pulls finance-subreddit posts (r/WSB, r/stocks, r/investing) via Reddit API (cURL and JsonCpp), scores sentiment, and outputs results to a live CLI and auto-generated HTML report.
- Applied modern C++ practices (RAII, STL) and thread-pool concurrency with mutex-guarded queues to accelerate data ingestion and scoring, producing near-real-time, actionable stock-sentiment insights.

Real-Time Earthquake Monitor Sep. 2024 – Nov. 2024

- Built a Node.js/Express.js service using USGS GeoJSON and streaming live updates via Socket.io and storing data on PostgreSQL while applying Flask microservice for real-time statistical analysis through RESTful API.
- Used HTML, CSS, JavaScript, and React on frontend and deployed PostgreSQL, Node API, and Flask analytics with Docker Compose pushing images to AWS ECR and scaling on ECS for continuous seismic tracking.

SKILLS

Technical Languages: C#, C++, C, Python, Java, SQL, JavaScript/TypeScript, HTML5/CSS3
Frameworks/Libraries: Node.js, Vue.js, React, .NET, Flask, Selenium, Jupyter, Reqnroll (BDD), WPF/MVVM
Cloud/Tools: Azure (ACR, AKS), AWS (RDS, EC2, ECS), Git, Docker, Jenkins, JIRA, Power BI, Excel
Practices: Object Oriented Design, RESTful API design, Agile Scrum, CI/CD, Test-Driven Development