

Ashmit Deb

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EDUCATION

University of Michigan

B.S. in Computer Science + Minor in Entrepreneurship

Cumulative GPA: 3.4/4.0

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

Aug. 2023 – May 2027

Ann Arbor, MI

EXPERIENCE

Software Engineer Intern

Sigray

May 2025 – Aug. 2025

Benicia, CA

- Enhanced feature development in Python/.NET spectral-analysis modules and NUnit tests for Sigray's AttoMap micro-XRF boosting feature delivery and CI/CD validation on Azure (AKS) via Jenkins (HTTP API + GUI)
- Integrated ML-based spectral decomposition & ROI clustering by implementing k-means notebooks in Jupyter thereby embedding fully 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

Software Engineer Intern

Blue Cross Blue Shield of Michigan

May 2024 – Aug. 2024

Detroit, MI

- Designed a REST-based claims processing system with Java and Spring Boot integrating PostgreSQL-backed validation logic to power an Angular frontend reducing processing times by 40% through scalable workflows
- 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

Software Engineer Intern

Phaseify

June 2023 – Aug. 2023

Remote

- Developed custom full-stack web application for the career-guidance platform implementing responsive UIs with React/Tailwind on the frontend and SQLite on the backend improving scalability and cutting manual coordination
- Designed Firestore-backed databases and implemented role-based authentication with Firebase Auth to support secure, scalable client portals, admin dashboards, along with real-time data sync and multi-user access control
- Converted Figma feedback into modular features to streamline workflows across custom platforms, translating designs into REST APIs with schema checks, error codes, and versioned routes lowering regressions and rework

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 the Reddit API (cURL + JsonCpp), scores sentiment, and outputs to a live CLI and auto-generated HTML report in real time.
- Applied modern C++ practices (RAII, STL) and thread-pool concurrency with mutex-guarded queues, plus lock-free metrics, 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 and 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 securely 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