Ashmit Deb

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EDUCATION

University of Michigan   Aug. 2023 – May 2027
B.S. in Computer Science + Minor in Entrepreneurship   *Ann Arbor, MI*
Cumulative GPA: 3.4/4.0
Extracurriculars: Michigan Financial and Math Society (MFAMS) & MHackers

EXPERIENCE

Software Engineer Intern   May 2025 – Aug. 2025
Sigray   *Benicia, CA*
- Enhanced development processes in Python with .NET spectral-analysis modules and NUnit tests for a microscopic X-Ray boosting feature while enabling CI/CD validation via Jenkins (Remote Access API + GUI) on Azure AKS
- Integrated Machine Learning spectral decomposition by implementing k-means clustering in Jupyter, thereby embedding fully automated mineral-phase segmentation directly into the scalable data analysis pipeline
- Built a REST Node.js microservice on AWS EC2 to stream real-time scanned X-Ray data to a Vue.js frontend dashboard, cutting preview latency by 30% via telemetry tuning and doubling productivity among engineers

Software Engineer Intern   May 2024 – Aug. 2024
Blue Cross Blue Shield of Michigan   *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, adding unit-tested queries and SharePoint validation dashboards, boosting data integrity and automated schema migrations for repeatable zero downtime releases
- Expanded the iOS and Android membership app by improving the eligibility/benefits-lookup feature through fixing 15+ bugs, wiring the React Native UI through Firebase to a Java Spring Boot backend for further security

Software Engineer Intern   June 2023 – Aug. 2023
Phaseify   *Remote*
- Developed custom full-stack web application for the career-guidance platform implementing responsive UIs with React on the frontend and SQLite on the backend improving scalability and cutting manual coordination by 25%
- 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, Swift, Python, Java, SQL, JavaScript/TypeScript, Rust, Go, HTML5/CSS3
Frameworks/Libraries: Node.js, Vue.js, React, .NET, Flask, Selenium, Jupyter, Firebase, Reqnroll, WPF/MVVM
Cloud/Tools: Azure (ACR, AKS), AWS (RDS, EC2, ECS), Figma, Git, Docker, Jenkins, JIRA, Power BI, Excel
Practices: Object Oriented Design, RESTful API design, Agile Scrum, CI/CD, Test-Driven Development