Ashmit Deb

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EDUCATION

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**
Bachelor of Science in Computer Science Aug. 2023 - May 2026
Minor in Entrepreneurship

- **Cumulative GPA:** 3.4/4.0
- **Extracurriculars:** Michigan Financial and Math Society (MFAMS) & MHackers

EXPERIENCE

SIGRAY **Benicia, CA**
Software Engineering Intern May 2025 - Aug. 2025

- Focused on automation testing and feature development in C# and .NET 8 for Sigray's AttoMap micro-XRF software creating BDD Gherkin scenarios in Reqnroll/SpecFlow, coding spectral-analysis modules, and running tests with OpenQA Selenium, NUnit, and Azure DevOps across APIs, CI/CD pipelines, and GUI workflows.
- Integrated ML-based spectral decomposition & ROI clustering by implementing k-means notebooks in Jupyter along with Python and embedded automated mineral phase segmentation directly into the analysis pipeline.
- Optimized UI performance through refactoring async data-binding, layout virtualization, and telemetry driven tuning while trimming initial load and scan-preview latency by 30% ensuring releases met functional targets.

BLUE CROSS BLUE SHIELD OF MICHIGAN **Southfield, MI**
Data Engineering Intern May 2024 - Aug. 2024

- Conducted source-to-target mapping to retrieve data transformation and migration across systems while utilizing SQL and ETL processes to maintain data consistency and optimize integration workflows.
- Used Power Automate along with Sharepoint for IT intake forms while also storing and formatting confidential patient inquiries for data integrity.
- Utilized TriZetto Facets to log and track inquiry tickets with Cognizant, validating end-to-end (E2E) and system-integration (SIT) workflows in non-production environments to ensure accurate claim diagnostics.

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.

PROJECTS

Stock Sentiment Analysis Utilizing Reddit API

- Built a multithreaded C++ tool that pulls posts from r/wallstreetbets, r/stocks, and r/investing through Reddits API (cURL + JsonCpp) and applies a weighted sentiment model presenting results through a live CLI and auto generate 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.

Arduino Based Night-Lamp

- Developed and designed an efficient Arduino-based LED Matrix Night-Lamp utilizing a C++ variant programming language tailoring light sensor data and button inputs to produce an interactive display.
- The hardware and software used adjusts the display using natural light as well as also offering a manual button to change the user's brightness preference and LED aesthetic design choice.

SKILLS

- **Technical Languages**: C#, C++, C, Python, Java, SQL, JavaScript, HTML/CSS, MATLAB
- **Frameworks & Libraries:** OpenQA Selenium, .NET, WPF/MVVM, Reqnroll (BDD), NUnit, Jupyter
- **DevOps & Tools:** Azure DevOps Pipelines, AWS, Git, JIRA, Power Automate, MySQL Workbench, Excel