

# Bavanan Bramillan

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## EDUCATION

### Drexel University

*Bachelor of Science in Computer Science*

Philadelphia, PA

*Sept. 2022 – June 2027*

- **Relevant Coursework:** Data Structures, Algorithms, Systems Programming, Databases, Linear Algebra, Discrete Math, Project Management
- **Certifications:** AWS Certified Cloud Practitioner

## EXPERIENCE

### Software Engineer Intern

*SRI International*

April 2025 – Sept. 2025

*Princeton, NJ*

- Engineered internal automation and full-stack systems that accelerated manufacturing and test workflows; developed a PyQt5 application that batch-processed LiDAR sensor data and generated metadata-driven PowerPoint/Excel reports using pywin32, reducing reporting time from 1 week to 2 hours.
- Designed and implemented a PostgreSQL-backed manufacturing database and a React/Next/Tailwind/shadcn website supporting device traceability, part drill-downs, and real-time production metrics.
- Integrated the platform with Empower Omnify PLM using mutual TLS authentication to ensure secure and identity-verified data exchange.
- Deployed the system internally via Nginx for remote desktop access over internal WiFi, then migrated the platform to AWS EC2 for improved reliability, scalability, and cross-team accessibility.

### Data Analyst Extern

*Beats By Dre, Extern*

June 2025 – Aug. 2025

*Remote*

- Analyzed 1,000+ Amazon headphone reviews using Python, TextBlob, Pandas, and Plotly to extract sentiment trends, feature mentions, customer pain points, and release-date patterns.
- Developed LLM-powered review analysis workflows using custom Gemini API prompts to generate structured, high-quality insights at scale.
- Delivered data-driven findings that supported product feature planning and marketing strategy across consumer insight teams.

## PROJECTS

### NYC WiFi Finder | *Swift, SwiftUI, MapKit, CoreLocation*

Dec 2025

- Developed iOS app to locate 500+ free public WiFi hotspots across NYC using NYC Open Data API
- Implemented MapKit with custom markers, real-time GPS tracking, and geospatial filtering by borough/neighborhood
- Architected SwiftUI interface with MVVM pattern, async/await networking, and dynamic state management
- Built distance calculation algorithm to find nearest hotspots and navigate users to locations
- Designed app icon and prepared for TestFlight beta testing and App Store deployment
- GitHub: [github.com/bobbramillan/nyc-wifi-finder](https://github.com/bobbramillan/nyc-wifi-finder)

### Summer 2026 Internship API | *Java, Spring Boot, REST API, Spring Data JPA, H2, Maven*

Dec 2025

- Built RESTful API with Spring Boot featuring 6 JSON endpoints to aggregate tech internship listings from GitHub
- Implemented automated hourly polling with @Scheduled jobs and ETag-based caching to optimize API requests
- Developed custom markdown parser using regex to extract structured data from HTML tables
- Designed database schema with JPA/Hibernate including deduplication logic and date-based filtering
- Created REST controllers with proper request validation and HTTP status handling
- GitHub: [github.com/bobbramillan/internship-api](https://github.com/bobbramillan/internship-api)

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R, Kotlin, Swift

**Frameworks:** React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI, NextJS, Vite

**Developer Tools:** Git, Docker, AWS EC2, Google Firebase, Visual Studio, IntelliJ, VS Code, JSON

**Libraries:** pandas, NumPy, Matplotlib, scikit-learn, PyQt, pywin32, PyInstaller