

# Arjun Boja

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## PROFESSIONAL EXPERIENCE

### Software Engineering Intern | Capital One

June 2025 - August 2025

- Engineered and deployed a serverless, cloud-native monitoring system using Python, AWS Lambda, ECS Fargate, and DynamoDB, improving API and service uptime by ~25% and reducing downtime risk by ~60% across mission-critical systems supporting 1,000+ employees.
- Architected Dockerized, event-driven microservices for automated health checks and failure recovery, reducing manual monitoring effort by ~45% and enabling near real-time issue detection.
- Built and integrated observability pipelines using New Relic, AWS CloudWatch, and custom telemetry agents, reducing mean time to detection (MTTD) by ~40% and accelerating incident response by ~35%.
- Collaborated with the Business Cards & Payments Tech team to deliver highly reliable systems meeting 99.99% uptime SLOs and internal compliance standards.

### Technical Director and Engineer | Roblox (Gochi)

June 2024 - June 2025

- Designed and deployed a real-time multiplayer architecture using Node.js, Express, and Lua, integrating event-driven APIs, data persistence layers, and cloud-hosted analytics to support 2,500+ monthly active users with sub-150 ms average latency.
- Led a team of engineers to optimize concurrency and network throughput using the Knit framework (Roblox service-oriented architecture), implementing asynchronous task scheduling, caching layers, and fault-tolerant matchmaking systems that improved gameplay stability by ~35% and increased player retention by ~20%.

### Co-founder & President | Computer Science Honor Society

September 2023 - June 2024

- Founded and scaled a Computer Science Honor Society chapter recognized by the national organization, growing to 70+ active members and mentoring 150+ students in Python, Java, and full-stack web development.
- Designed and launched an internal web portal using Flask, HTML/CSS, and SQLite to automate event registration, attendance analytics, and membership tracking, reducing administrative workload by ~70%.
- Increased student participation in advanced CS topics by ~40% by organizing an annual hackathon and leading algorithmic problem-solving workshops.
- Integrated Git/GitHub-based CI workflows and introduced AI/ML fundamentals into the club's curriculum to modernize project development and collaboration practices.

## PROJECTS

### Niche

September 2025 - Present

- Built a full-stack web and iOS application using Flask, Node.js/Express, and MongoDB (geospatial indexing), including a collaborative-filtering recommendation engine and a custom "Niche Score" algorithm to deliver personalized event recommendations.
- Developed React (web) and React Native (iOS) frontends with PWA support, JWT-based authentication, and performance optimizations such as lazy loading, caching, and database indexing, reducing average load time by ~1.5 seconds.
- Implemented automated testing using Jest and PyTest to improve reliability and maintainability across frontend and backend components.

### StudyBuddy Scheduler

January 2025 - June 2025

- Engineered a full-stack scheduling platform using ReactPy and FastAPI, implementing multiple algorithmic scheduling strategies (priority queues, greedy heuristics) to optimize study sessions.
- Computed and visualized productivity metrics using Matplotlib, while optimizing backend response times and algorithm runtime to achieve ~35% faster schedule generation.
- Integrated the ZenQuotes API for dynamic motivational content, implemented schedule export (CSV/TXT), and ensured reliability through unit testing with PyTest, resulting in ~20% higher daily user engagement.

## EDUCATION AND SKILLS

### University of Maryland, College Park | GPA: 4.00

May 2027

#### B.S. Information Science

**Relevant Coursework:** Data Structures and Algorithms; Database Design (MySQL); Object-Oriented Programming; Machine Learning in Communication; Statistics for Information Science (R); Information Organization; Organizations, Management, and Teamwork; Entrepreneurial Opportunity Analysis

**Skills:** Python, Java, JavaScript, TypeScript, Lua, R, SQL | Flask, FastAPI, Express, React, React Native | AWS (Lambda, ECS Fargate, DynamoDB, CloudWatch), Docker, Serverless, CI/CD (GitHub Actions) | MongoDB, SQL, Event-Driven Systems, Microservices, Caching | PyTest, Jest, New Relic | Data Structures & Algorithms, JWT Authentication, AI/ML Fundamentals