Charles Milton

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EDUCATION

California State University Long Beach — Long Beach, CA
Bachelor of Science in Computer Science — *Aug. 2022 – May 2026*

Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Databases, Software Engineering, Operating Systems, Machine Learning, Distributed Systems

Leadership: Lead Developer at ACM at CSULB; Project Lead at XR Engineering Club

Certifications: Machine Learning Specialization (DeepLearning.AI, Stanford, Coursera)

EXPERIENCE

Software Developer — Aug 2025 – Present
Associated Students, Inc. at California State University Long Beach — *Long Beach, CA*
- Replaced a $2,300/year third-party magazine host with an in-house viewer and uploads dashboard (React, Node.js, Cloudflare R2, MongoDB, CloudConvert API), cutting cost to **$0** and serving thousands of users.
- Maintain and develop ASI web platforms for **40,000+** students with accessibility, reliability, and performance goals.
- Ship responsive features for student programs and events that increase engagement across campus.

Software Development Engineer Intern — May 2025 – Aug 2025
Amazon — *Bellevue, WA*
- Built an AWS-native Java service to correct retail inventory misclassification in fulfillment centers, reducing cost data inaccuracies by **80%** globally and adding CloudWatch metrics and monitoring.
- Collaborated with SDE II engineers to resolve a Sev-2 affecting **1,700+** transactions by shipping a hotfix that restored system stability and data integrity.
- Authored internal documentation that improved onboarding and knowledge sharing across engineering and accounting teams.

Software Engineer Intern — Sep 2024 – Dec 2024
DreamWay Media — *Glendale, CA*
- Converted Figma designs into responsive PHP/React pages with pixel-accurate UI.
- Refactored e-commerce web apps, boosting performance scores by **30%**.
- Containerized development with Docker for a 5-person team, speeding onboarding and reducing environment issues.

PROJECTS

SharkPark | *React Native, NestJS, TypeScript, AWS (LocalStack, DynamoDB), Docker* — Aug 2025 – Present
- **Lead developer for a 5-person senior project** building a mobile parking platform for 30,000 CSULB commuters that uses **privacy-preserving sensors** with geofencing and activity recognition to capture enter and leave events.
- Architected a **full-stack monorepo** with a NestJS API and React Native app to aggregate live signals, serve occupancy, and prepare **ML forecasting** and personalized lot recommendations using **DynamoDB Local**, **LocalStack**, Docker, and GitHub Actions CI.

ACM at CSULB Website | *Next.js, MongoDB, Cloudinary, Discord API, JWT* — Oct 2024 – Present
- Built and shipped the **official ACM CSULB platform** with events, blogs, and member tools for a **community of 500+ students**.
- Developed a **JWT**-secured admin dashboard with **Cloudinary** media and automated email and **Discord** announcements, delivering a responsive, SEO-friendly site that improves officer workflow.

Heart Failure Prediction ML Pipeline | *Python, scikit-learn, pandas, NumPy, Matplotlib, Jupyter* — May 2025
- Built supervised learning pipeline to predict heart failure from patient vitals and ECG data, implementing and comparing 6 models (Logistic Regression, SVM, Random Forest, Neural Networks, Naïve Bayes, Decision Trees) with GridSearchCV hyperparameter tuning.
- Achieved **93% AUC** and **86% F1-score** using soft-voting ensemble of L1-penalized Logistic Regression and Random Forest, with RFE feature selection identifying ST_Slope and Oldpeak as top predictive ECG indicators.

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, C++, C#, PHP, SQL, GraphQL, HTML/CSS
Frameworks & Libraries: React, Next.js, React Native, Node.js, NestJS, Flask, Tailwind CSS
Cloud/DB/Infra: AWS (Lambda, DynamoDB, S3, CloudWatch), Google Cloud Platform, Docker, LocalStack, MongoDB/GridFS, PostgreSQL, MySQL, Firebase, Supabase, Neo4j, Redis
AI/ML: TensorFlow, scikit-learn, PyTorch, pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook, OpenAI API, ElevenLabs API, Hume AI API
Tools & DevOps: Git/GitHub, PNPM/Turborepo, GitHub Actions, Postman, JUnit, Chrome Extensions (MV3)