Subham Mitra

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Education

University of California, Berkeley **Expected Spring 2026**
B.S. Electrical Engineering & Computer Science *GPA: 3.7/4.0*
Relevant Coursework: Data Structures & Algorithms, Efficient Programs, Machine Structures, Discrete Mathematics, Probability & Random Processes, Linear Algebra for ML, Intro to Artificial Intelligence, Digital Design & Integrated Circuits

Experience

Oracle NetSuite **Incoming Jan 2025**
Software Engineer (Contract) *Redwood City, CA*

SXS Unlimited Rentals *via Mobile Developers of Berkeley* **Sep 2024 – Present**
Technical Project Manager *Berkeley, CA*
- Leading team of 6 React Native developers in building $31k vehicle rental marketplace app, managing 11 milestone deliverables including vehicle management, booking systems, payment integration, and user role differentiation.
- Architected and deployed scalable serverless backend infrastructure using AWS CDK, Lambda functions, S3 storage, Aurora PostgreSQL, AppSync, and Cognito, reducing projected monthly costs by 80% through serverless compute.
- Established comprehensive end-to-end development workflow including code review processes, automated CI/CD pipelines, and structured biweekly sprints, consistently maintaining 100% on-time delivery across all project milestones.

International Computer Science Institute **Aug 2024 – Present**
Research Assistant *Berkeley, CA*
- Led statistical analysis for an 800-participant study on telehealth app privacy, conducting mixed-effects regression modeling (CLMM, GLMM) and implementing robust statistical tests including Wilcoxon and McNemar's tests.
- Executed comprehensive data transformation and validation procedures, including multicollinearity testing (VIF analysis), heteroskedasticity assessment (Breusch-Pagan), and distribution analysis (Kolmogorov-Smirnov), ensuring statistical rigor in analyzing non-normally distributed bounded proportion data across multiple dimensions.

UC Berkeley EECS Course Staff | CS 70 **Aug 2024 – Present**
Teaching Intern *Berkeley, CA*
- Lead weekly discussion sections for 700-person undergraduate course, implementing interactive teaching methodologies to convey concepts in probability theory, modular arithmetic, graph theory, and rigorous mathematical proof techniques.
- Provide individualized student support through one-on-one tutoring sessions, and answering 50+ questions in discussion forum, focusing on complex topics like counting principles, conditional probability, and discrete random variables.

Stanford University GSB **Jul 2024 – Nov 2024**
Software Engineer Intern *Stanford, CA*
- Engineered an automated co-founder matching platform serving 500+ MBA/undergrad students, reducing administrative manual matching time by 90% through a serverless architecture using AWS Lambda, Python, and Airtable.
- Implemented KNN-based matching algorithm with custom weighting factors achieving 85% match satisfaction rate.
- Developed automated email notifications using Gmail API, resulting in 3x higher response rates over manual outreach

Presidium Health **May 2024 – Sep 2024**
Software Engineer Intern *San Diego, CA*
- Engineered automated medical order processing system that reduced data entry by 75% across 1000+ monthly orders.
- Developed Python scripts to extract patient data from Zendesk tickets and synchronize with Google Sheets. Created standardized submission interface that achieved 90% provider adoption and reduced clarifications by 60%. Built caller identification system using AWS Connect and Lambda, reducing patient lookup time by 85% for 50+ daily calls.

Projects

Mentora | *React, Deepgram, Cartesia, OpenAI, Node.js* |
- Architected and developed an interactive voice AI tutoring platform using React and Node.js, integrating Deepgram's real-time speech analysis, Cartesia's voice cloning technology, and Tldraw's collaborative whiteboard interface.
- Engineered a multi-modal learning system that processes concurrent audio, visual, and text inputs through OpenAI API, implementing custom sentiment analysis to deliver adaptive, step-by-step educational guidance for K-8 students.

AI Lecture Assistant | *React, AWS Bedrock, Supabase* |
- Developed AI-powered lecture platform that automatically generates quizzes from YouTube and provides GPT-powered assistance, featuring AWS Bedrock RAG for cross-video concept search and Supabase for scalable data storage.

Invoice Owl LLC | *React Native, Swift*
- Contracted by Koios LLC for YC-Backed company. Successfully ported and rewrote native Swift code to cross-platform app. Rewrote backend functionality and established CI/CD pipeline through GitHub Actions for code updates.

Skills / Awards

Skills: Python, Java, C++, JavaScript, React, Git, Firebase, AWS, Arduino, OpenAI, Figma, JUnit, Docker, CI/CD
Awards: 3x Hackathon Winner, 2x Case Competition Winner, $10k Pitch Competition, PSAT/NMSQT Merit Scholar