

Kush Patel

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Education

University of California, Berkeley | Master of Information and Data Science

Sept 2025 - May 2027

University of California, Berkeley | Bachelor of Arts in Data Science

May 2022 - May 2024

Relevant Coursework: Structure Interpretation of Computer Programs(**Python, SQL**) Data Structures(**Object Oriented Java programming**) Foundations of Data Science(**Data Analysis, scikit-learn**) Discrete Math and Probability(**Probability Theory, Discrete Math**) Data Engineering(**Advanced Data Engineering, Pytorch, Tensorflow**) Data Mining and Analytics(**Advanced Data Analysis, Tableau**) Concepts of Probability(**Statistics Theory**) Data Inference and Decisions(**Data Decisions**) Intro to Artificial Intelligence(**Neural Networks, Machine Learning**) Advanced iOS Programming(**SwiftUI**)

Work Experience

DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL: INFORMATION TECHNOLOGY

FULL-STACK SOFTWARE ENGINEER

Jun 2024 - Present

- Back-End Development: Designed and optimized scalable APIs for data processing, ensuring high-performance and secure interactions between Flask, PostgreSQL, and MongoDB. Expertise in Docker, Kubernetes, CI/CD pipelines, and version control (Git) for seamless deployment and model integration. Reduced latency in data processing tasks by leveraging algorithmic optimizations and efficient memory handling.
- Front-End Development & Data Visualization: Built interactive dashboards using React, JavaScript, and Tableau to present actionable insights from large datasets. Developed and refined UI/UX strategies for data-driven applications, leveraging tools like Figma, Miro, and Adobe Creative Cloud for wireframing and usability testing. Implemented WCAG-compliant web interfaces to ensure accessibility and seamless user experience. Engaged with stakeholders throughout the project lifecycle to ensure alignment with deliverables.

DEPARTMENT OF JUSTICE: CRIMINAL JUSTICE INFORMATION SERVICES

STUDENT ASSISTANT SOFTWARE ENGINEER

Jul 2020 - Jan 2022

- Led the data migration of the Criminal Justice Information Services online repository to Confluence, structuring over 500 resolved issues in Jira and optimizing database queries for firearm license submissions in SQL, reducing retrieval time by 25%
- Conducted statistical analysis on firearm license application data, identifying key trends that improved processing efficiency and informed policy recommendations.
- Assisted in designing predictive analytics models to detect anomalies in firearm licensing data, improving fraud detection rates by 18%.

DEPARTMENT OF JUSTICE: APPLICATION DEVELOPMENT BUREAU

STUDENT ASSISTANT SOFTWARE ENGINEER

Jun 2023 - Aug 2023

- Analyzed and optimized SQL queries for data retrieval, reducing query execution time, improving system efficiency for case management applications.
- Assisted in automating data processing pipelines using Pandas and Flask, decreasing manual intervention time for internal reporting tools.
- Examined and tested recently deployed software applications, identifying and documenting bugs, exploits, and security vulnerabilities using Python-based anomaly detection models to enhance system security.

Awards & Notable Accomplishments

CompTIA Security+ Certified | Over **100,000** purchases on the Apple App Store | Over **2,000,000** impressions on downloaded applications | Certified Apple **Non-Profit Organization** Developer

Leadership & Projects

TEXTJOURNAL

Jan 2023 - Present

- Collaborated with Twilio, Flask, and AWS EC2 to develop TextJournal, a machine learning centered mental health iOS application that records a user's daily thoughts and feelings by using cloud computing and the built-in SMS feature of a smartphone and uses real-world therapy AI to talk to users. Uses NLP and sentiment analysis to tailor user experience to their specific needs.
- Exemplifying the useful application of Python, RESTful API, SQL database manipulation, data analytics, business intelligence, and analytical problem-solving in real-world scenarios.

BRINGING BACK SMILES FOUNDATION

Sept 2021 – Sept 2022

- Pioneered the establishment of a COVID-19 relief Non-Profit Organization, driven by a clear purpose to raise funds and awareness during the pandemic, raised over \$4,000 in finances towards cause.
- Directed the development and publication of a user-friendly iOS mobile application and website. Garnered over 50,000 impressions, and over 7,000 downloads.