Kush Patel

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Career Profile

Highly motivated, innovative, and career-oriented data scientist with expertise in identifying valuable data sources, automating collection processes, and developing predictive models using **Python and R**. Proficient in software development across networking, operating systems, database management, cybersecurity, and applications, with hands-on experience in Java, C++, JavaScript, Swift, and React AI. Adept at deploying programs, debugging software, and creating technical documentation to meet user needs. Skilled in machine learning frameworks like **TensorFlow, Keras, and PyTorch**, and data visualization tools such as **Tableau and Matplotlib**. Experienced with cloud platforms (AWS), DevOps, RESTful APIs, and Agile methodologies. Strong ability in design thinking for data solutions, leveraging expertise in **Flask, PostgreSQL, MongoDB, MySQL**, and front-end technologies like **HTML5, CSS, React Native, and AngularJS**. Passionate about technical decision-making to drive innovation and efficiency. Looking for an opportunity to apply my skills in data science, AI, and software development to solve complex challenges.

Education

University of California, Berkeley, CA | Bachelor of Arts in Data Science   May 2022 - May 2024

Relevant Coursework: CS61A: Structure Interpretation of Computer Programs **(Python, SQL)** CS61B: Data Structures **(Object Oriented Java programming)** DATAC8: Foundations of Data Science **(Data Analysis, gained expertise in scikit-learn)** CS70: Discrete Math and Probability (**Probability Theory, Discrete Math)** DATA100: Principles of Data Science DATA101: Data Engineering **(Advanced Data Engineering, gained experience in Pytorch and Tensorflow as well as feature engineering)** DATA144: Data Mining and Analytics **(Advanced Data Analysis, gained experience in machine learning, data visualization with Tableau, and meaningful feature selection)** STAT134: Concepts of Probability **(Statistics Theory, learned hypothesis testing and probability distributions)** DATA102: Data Inference and Decisions **(Data Decisions)** CS188: Intro to Artificial Intelligence **(Experience in Neural Networks, Machine Learning)** iOS Decal: Advanced iOS Programming **(SwiftUI and Backend Experience)**

Experience

DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL: INFORMATION TECHNOLOGY   Jun 2024 - Present
FULL-STACK SOFTWARE ENGINEER | UX STRATEGIST
- 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. Applied data structures and algorithms to enhance system efficiency and reduce computational overhead.
- 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.

DEPARTMENT OF JUSTICE: CRIMINAL JUSTICE INFORMATION SERVICES   Jul 2020 - Jan 2022
STUDENT ASSISTANT SOFTWARE ENGINEER
- 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   Jun 2023 - Aug 2023
STUDENT ASSISTANT SOFTWARE ENGINEER
- 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.

Leadership & Projects

TEXTJOURNAL | *SOFTWARE ENGINEER | RESEARCH LEAD*   Jan 2023 - Present
- Collaborating with Twilio, Flask, and AWS EC2 to develop TextJournal, a 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.
- 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 | *LEAD WEB DEVELOPER | LEAD MOBILE DEVELOPER*   Sep 2021 - Sep 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 thousands of dollars in finances towards cause.
- Directed the development and publication of a user-friendly iOS mobile application and website, with scope designed to engage supporters and fund research groups, directed human factors

Skills

Languages: Python, R, C, Java, C++, JavaScript, SwiftUI, React AI, React Native, Objective-C, Swift, C++ | **Tools:** *Tableau, Keras, Tensorflow, Pytorch, scikit-learn, Matplotlib, AWS, Microsoft Office, Agile, Git, TwilioAPI, RESTful API, Pandas, NumPy, Helm, Miro, Figma, Flask |* **Databases:** *MySQL, PostgreSQL, MongoDB |* **Web Technologies:** *PHP, JavaScript, HTML5, CSS, jQuery, AngularJS, WCAG, WordPress CMS |* **Other:** *DevOps, GenAI technologies, Accountability, Communication, Creativity, Organization, SDLC, Low-Power Optimization, Multithreading, Performance Optimization, Collaboration, Architecture Design, Feature Development, Technical Decision Making, Infrastructure Practices*

Awards & Notable Accomplishments

CompTIA Security+ Certified | Over 100,000 downloads and purchases on the Apple App Store | Certified Apple Non-Profit Organization Developer