

SHIV JHALANI

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EDUCATION

- Santa Clara University, College of Arts & Sciences** (Santa Clara, California) September 2021 - June 2025
Bachelor of Science in Computer Science (Data Science Emphasis), Minor in Mathematics GPA: 3.96
- **Relevant Coursework:** Data Science, Data Mining, Applied Machine Learning, Discrete Mathematics, Linear Algebra
 - **Activities & Societies:** Theta Tau Professional Engineering Fraternity – *Professional Development Chair (2023-24)*, Association for Computing Machinery – *Director of Communication (2023-24)*, Ciocca Center for Innovation & Entrepreneurship – *Director of Communication (2023-24)*, Career Center – *Peer Career Advisor*
 - **Awards and Honors:** Alpha Sigma Nu, Phi Beta Kappa, Upsilon Pi Epsilon, Student Life Award, University Honors Program

SKILLS

- **Languages & Technologies:** Python, C++, SQL, Flask, Git, Java, AWS Lambda, AWS Step Functions, JavaScript
- **Areas of Focus:** Machine Learning, Data Science, Natural Language Processing, API Design & Development, Research

WORK EXPERIENCE

- INRIX, Backend Software Engineer** August 2025 - Present
- Develop & optimize high-performance APIs & software solutions using Python, Java, and AWS to deliver mobility data solutions
 - Architect & integrate scalable data processing workflows to enable new customer-facing features while maintaining existing systems with focus on clean code & CI/CD best practices, while maintaining cost efficiency across cloud-native environments

- INRIX, Backend Software Engineering Intern** June 2024 - September 2024
- Enhanced efficiency of customer-facing API using **Python, Java, & AWS** technologies, cutting costs by **30%-90%**
 - Upgraded legacy code to modern versions to improve performance & maintainability while ensuring backward compatibility

- INRIX, Software Engineering Intern** June 2023 - September 2023
- Implemented automated multithreaded data ingestion pipeline for an internal tool using **Java, Python, & AWS** technologies
 - Mitigated error-prone data update process, improved efficiency by 20%, deployed code to production & tested in CI/CD pipeline
 - Led 11-member team to final round of company-wide hackathon, through global cross-team collaboration & project management

RELEVANT RESEARCH

- Clickbait Detection on Social Media Platforms using Topic Modeling**, Research Assistant January 2024 - June 2025
- Collaborated with team of 2 to detect clickbait on social media through **OpenAI APIs & topic modeling algorithms** like LDA
 - Utilized OpenAI APIs to summarize text columns, transform into vectors using sentenceTransformers library & employ cosine similarity to **quantify correlation** between the title & transcripts on two different datasets of a total of over 7700 rows
 - Co-authored research paper detailing significant findings, **presented & published** at the 2024 IISA conference

- Online Hate Speech Spreader Detection using Modified PageRank Algorithm**, Research Lead October 2021 - January 2024
- Led team of 3 to detect & flag hate speech spreaders on online social networks using **Python** & libraries like sklearn
 - Modified Google's PageRank algorithm to implement **graph-based** model using adjacency matrices to calculate user influence & measure hate speech spread within user networks, enabling **data & network analysis** on pre-trained **machine learning** models
 - Co-authored research paper detailing significant findings, **presented & published** at the 2023 International DSML conference

RELEVANT PROJECTS

- Post Filtering Extension**, Backend Developer (1st Place Winner - Replit Award, xAI Hackathon) October 2024
- Designed & implemented backend architecture of Chrome extension that filters out engagement farmers, self-promoters, & bots on X using **Grok 2 LLM** and **xAI APIs**, fostering relevant and meaningful conversations
 - Integrated X APIs to retrieve and process posts in a streaming architecture, enabling incremental data delivery & reduced latency

- Academic Support Platform**, Backend Developer (Google Gemini API Developer Competition) August 2024
- Engineered backend architecture of web application designed to enhance academic life by simplifying course registration & providing real-time academic support using **Python, Flask, & effective prompt engineering for Google's Gemini API**
 - Utilized Google's **Gemini API** to develop AI-driven Virtual Tutor & Academic Advisor tools for personalized student assistance
 - Integrated **Firebase** for secure data storage & efficient management of chat histories, ensuring reliable app performance

- Career Fair Data Analysis Automation**, Script Developer April 2023
- Developed **Python** program using pandas library to automate the data analysis process for career fairs, providing quick & accurate insights into student & employer trends based on demographics & feedback
 - Reduced manual work & saved a week's worth of time, increasing efficiency by **700%** over **900+** rows of data

- Trip Generator App**, Backend Developer (1st Place Winner, SCU INRIX hackathon) November 2022
- Designed & implemented application backend using **Python, Flask, & INRIX Routing API** to develop optimized routing algorithm for users that generate an itinerary based on hotspots in a geographic location
 - Identified & implemented relevant **graph** theory to develop optimal routing algorithm in under 24 hours
 - Implemented **Flask API** to return line strings of coordinates to enable front-end map routing on Google Maps plugin