SAHIL SHAH

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EDUCATION

The University of Texas at Austin Bachelor of Science, Mechanical Engineering — May 2025
Minor in Computer Science
Concentration: Statistics, Probability, Data Science

EXPERIENCE

The Home Depot – *Software Engineering Intern;* Remote — May 2023 – Aug 2023
- Built a Python ML pipeline to automate the population of Big Query column descriptions, enhancing data discoverability
- Engineered a prompt for Google PaLM 2 LLM, and ran the model using SQL (BQML) to generate descriptions with 70% accuracy
- Validated model responses using a tested BERTScore model, saving 100+ man-hours
- Scaled the pipeline by parallelizing API calls so that employees can retrieve descriptions for any given table

Texas Department of Transportation – *Engineering Support Intern;* Austin, TX — May 2022 – Aug 2022
- Deployed script in waves to update 10,000+ company devices to Windows 21H2; Troubleshooted until 100% success
- Automated device backup/restore and desktop notifications with SCCM to prevent human error on weekly tasks
- Configured 18 laptops and iPhones with a specific UI as a kiosk system for a company conference
- Innovated a method to customize laptop set-up process with a scripted, auto-run USB drive, streamlining manual process by 150%

Fire Research Group – *Undergraduate Researcher;* Austin, TX — Mar 2022 – May 2023
- Burned an electric vehicle in a sealed garage and constructed a solenoid gas pump system to extract the air inside
- Developed a method to analyze battery fires with a mathematical algorithm in Python relating gas colors to toxicity (85% accurate)

ACADEMIC PROJECTS

Wine Quality Predictor – *Intern (The Home Depot)* — Summer 2023
- Trained a machine learning model that predicted wine quality increasing accuracy by 61%
- Determined the quality on a scale 1-10 based on 11 factors using a RandomForrestRegressor

Delivery Drone – *Project Lead (UAVA)* — Spring 2023
- Designed a body and electrical system for a drone that would deliver emergency medical supplies to students on campus
- Programmed AI flight control algorithm for a drone to travel the safest and quickest path to and from destination

Household Object Finder – *Competitor (UT Austin)* — Fall 2021
- Competed in a hackathon for the most accurate ML model to identify certain objects from living room pictures
- Received 1st place by utilizing a neural network to successfully identify all 38 unique household objects required by the rules

LEADERSHIP EXPERIENCE AND ACTIVITIES

Texas Raas – *Executive Board* — Fall 2023 – Present
- Spearheading the production of a dance, including audio track, choreography, theme, and props for 5 national competitions
- Delegating tasks to efficiently meet deadlines set by captains, while managing a $15,000 budget

Unmanned Aerial Vehicles Austin (UAVA) – *Project Lead* — Fall 2022 – Spring 2023
- Supervised hardware and software teams to collaborate and complete a drone build in time for a race
- Taught needed technical skills (CAD, Python) to new members and facilitated their integration into the existing teams

SKILLS

Languages and Frameworks: Python, SQL, R, JavaScript, React, Java, MATLAB, HTML, CSS, Powershell, C++
Developer Tools: Git, VS Code, PyCharm, Google Cloud Platform, Jira, Kaggle, SCCM
Libraries: NumPy, Pandas, Matplotlib, Sci-Kit Learn, TensorFlow, PyTorch, NLTK, Kubernetes
Relevant Coursework: Software Design, Data Structures/Algorithms, Linear Algebra, Statistics, Probability, Engineering Computation
Mechanical: CAD, Laser Cutting, 3D printing, Machining, Embedded Systems, Dynamic Systems, FEA, System Design, Arduino

ADDITIONAL INFORMATION

Interests: Music Production, Project Cars, Entrepreneurship, Drawing, Traveling, Cooking, Chess, Poker
Achievements: Raas All-Stars National Championship 1st Place (2023), President's Volunteer Service Award (2020)
Work Eligibility: Eligible to work in the U.S. with no restrictions