SNEHEIL SAXENA

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EDUCATION

University of California, Irvine   **Irvine, CA**
M.Eng. in Electrical Engineering & Computer Science (EECS), GPA: 3.67   **Graduating Dec 2025**

University of California, Berkeley   **Berkeley, CA**
Global Access Program (Visiting Student)   **Jan 2024 – May 2024**

University of California, San Diego   **La Jolla, CA**
BS in Mathematics & Computer Science   **Sept 2016 - Dec 2020**

WORK EXPERIENCE

Engineer, M.Eng Capstone Project   **Jan 2025 – Present**
Yazaki Innovations   **Irvine, CA**
- Leading software development on a scalable C++/Python pipeline for efficient computational modeling and data processing
- Developing optimized graph (network) algorithms for pre-fabricated residential wiring, reducing processing time for task by 99.5%

Engineer, AR/VR Research Division   **Nov 2021 – Oct 2023**
Qualcomm   **San Diego, CA**
- Developed a **Python automation tool** to streamline AR/VR chipset power analysis of 6DoF features, improving efficiency
- Enhanced controller-free hand tracking for AR/VR headsets using **Computer Vision & Machine Learning techniques**
- **Analyzed power & bandwidth data** for a point cloud-to-depth algorithm across different modes (single threaded vs multi-threaded, low clock rate vs high clock rate, low vs high framerate), influencing product optimization for clients like Meta

Software Engineer Intern (Full-stack)   **June – Aug 2019**
Housecall Pro   **San Diego, CA**
- Used **React & Material UI** to implement design enhancements to "website template", also refactoring existing components
- Created backend server endpoints to perform CRUD actions in **Ruby on Rails** and implemented functional tests with **RSpec**

Software Engineer in Test Intern   **July – Sept 2017**
Reliance Jio Infocomm   **Frisco, TX**
- Developed & implemented extensive **black-box test suite** for the Jio Phone using Python scripts via an **automated test framework**
- Collaborated with offshore QA teams to enhance testing efficiency through structured reporting

RELEVANT PROJECTS

Front-End Performance Analysis & Optimization Reports | *Google Lighthouse, WebPageTest, HTML, CSS, JavaScript*   **April – Aug 2020**
- Analyzed website performance using metrics like relative bandwidth consumption, rendering times, security, and accessibility
- Optimized websites using techniques like code minification, image compression, progressive loading & changing caching frequency of static elements

Recurrent Neural Network for Language Identification (Classification) | *PyTorch, NLTK, Python*   **Sept – Dec 2018**
- Developed an RNN model in PyTorch for multilingual text classification, achieving ~80% accuracy across five languages

IEEE Club Quarterly Project, Smart Deadbolt Unlock, UC San Diego | *Linux, Django API, Raspberry Pi, Python*   **April – July 2018**
- Developed a 2FA-based smart lock system integrating facial recognition and SMS authentication using a Django server on a Raspberry Pi
- Engineered the hardware interface with an Arduino-powered torque motor for physical unlocking

LANGUAGES AND FRAMEWORKS

Proficient: Python, C++, C, Java, JavaScript, HTML, CSS, R   **Familiar:** Ruby, SQL, MATLAB
Frameworks & Tools: React, Linux scripting (Bash/Unix shell), GDB, Valgrind, Git, PyTorch, Google Magenta, Redux, RSpec, Firebase

EXTRACURRICULAR & AWARDS

Sponsorship Lead, Triton Engineering Student Council, UC San Diego   **May – Nov 2019**
- Led sponsorship efforts, raising funds for SD Hacks (750+ attendees) and Decaf Career Fair

2nd Prize, HackIoT 2018, University of Southern California, LA   **March 2018**
- Built "HomeSafeHome," a home monitoring system leveraging Django and Raspberry Pi to detect unauthorized access attempts