SNEHEIL SAXENA

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EDUCATION

University of California, Irvine — **Irvine, CA**
M.Eng. in Electrical Engineering & Computer Science (EECS), **GPA: 3.85** — **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 C++/Python pipeline for automating electrical wiring design, **optimizing task time by 99.5%** using graph algorithms

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 VR algorithms across different modes, influencing product optimization decisions 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

RESEARCH & TEACHING

Deep Learning Accelerators - Optimizing Non-GEMM Operators - Prof. Hyoukjun Kwon, UCI — **April 2025 – Present**

- Exploring Multi-Level Intermediate Representation (MLIR) for dynamic dataflow optimization in mapping non-GEMM operations to DL accelerators

Reader, Course Assistant, EECS 50 – Discrete-Time Signals and Systems, UCI — **April 2025 – Present**

- Working with Prof. Syed Jafar to grade homework and provide clear & constructive feedback to enhance student understanding and performance

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

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**

- Developed a 2FA-based smart lock system integrating facial recognition and SMS authentication using a Django server on a Raspberry Pi