Neelansh Khare

949-992-6803 | kharen@uci.edu | linkedin.com/in/neelansh-khare | github.com/Neelansh-Khare | neelanshkhare.notion.site

Education

University of California - Irvine Irvine, CA

Bachelor of Science in Computer Science

Relevant Coursework: Machine Learning & AI, Data Structures and Algorithms, System Design, Data Management, Software Testing and QA, Compilers & Operating Systems
Languages: Python, Java, JavaScript, C++, C, R, Go
Frameworks/Technolgies: React, AWS, TensorFlow
Developer Tools: SQL, Git, Docker
Leadership: Software Developer for ICSSC, President for the Indian Subcontinental Club, Google Developer Student Club, Volunteer for ENGin, Software Developer for Legacy Robotics, Data/Analytics Chair for Sigma Pi

Experience

Software Engineer June 2022 – Present

University of California, Irvine *Irvine, CA*

- Developed and deployed a **Java** automation system for effort reporting, reducing processing time by **90%** and eliminating manual data entry errors.
- Architected a documentation generator using **Java and RESTful APIs**, helping with quicker onboarding.
- Implemented and tested complex **backend** features for a financial aid portal using **Java and JUnit**, resulting in new features including faster data loading time by **30%**.
- Resolved **frontend** visual bugs and created a frontend **testing framework** using **React and Playwright**, fixing UI inconsistencies.
- Designed and implemented a database anonymization application using **Java and SQL**, to ensure FERPA compliance.
- Engineered **JavaScript** data processing scripts that created **SQL** queries automatically from an Excel sheet, saving hours for developers weekly.

Undergraduate Researcher January 2024 – Present

He Lab, University of California, Irvine *Irvine, CA*

- Developed a **deep-learning model** using computer vision to predict nano-particle motion, enabling advancements in material science research (Pending paper publication).
- Engineered and optimized a Python based CNN for electron microscopy analysis, achieving **95%** accuracy in particle identification as well as developed my own scripts for data inference and preprocessing.
- Created a synthetic **data generation** pipeline that can produce **10000+ realistic microscopy images**, enabling robust model training and validation.

Projects

AI Based Stock Trading | *Python, REST APIs*

- Engineered an automated trading system utilizing Bard AI for market analysis and Schwab APIs for execution.
- Implemented **risk management algorithms** with stop-loss mechanisms.
- Developed real-time market monitoring system processing data from an exchange with **sub-second latency**.

Object Recognition Script | *Python, Matplotlib, OpenCV*

- Developed a real-time object detection system with **97%** accuracy for household items using custom-trained **CNN** models.
- Built a user-friendly **GUI** for real-time visualization and result logging using **Matplotlib**.

Python Based Discord Bots | *Python, REST APIs*

- Implemented competitive gaming features with PostgreSQL leaderboard system, driving 70% increase in user engagement.
- Created automated moderation tools using natural language processing to maintain community guidelines.
- Designed asynchronous event handling system for optimal performance during high-traffic periods.

Compiler and Interpreter | *Python*

- Built a fully-functional compiler/interpreter from scratch in Python that processed the low level language Tiny.
- Implemented a lexer, parser, and the ability to add user defined functions and variables.