Suyash Jain

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EDUCATION

University of California, Irvine | BS, Computer Science, Business Information Management   **Graduation: June 2026 | GPA: 3.74**
Coursework: *Data Structures & Algorithms, Artificial Intelligence, Operating Systems, Software Libraries, Human-Computer Interaction, Object Oriented Programming, CS Statistics, Boolean Logic, Discrete Structures, C/C++ Programming.*

SKILLS AND INTERESTS

Languages | FrameWorks: Python, Java, C/C++, React.js, Node.js, Golang, Rust, MIPS, CSS, TensorFlow, Pytorch, Android Studio
Skills: Git, APIs, SQLite, Firebase, Google Cloud, AWS Cloud, REST/GraphQL, Computer Vision, Data Pipelines, Hugging Face
Interests: AI/ML, AR/VR, Cybersecurity, Cloud Computing, Android Development, Robotics, IoT, Computer Vision, Blockchain
Papers: CFN-BS for 6G (IEEE TMC, 2025); Frequency Hybrid Mobility (IEEE ACM, 2025); PACE in Mentorship (AstroEdu, 2025)

EXPERIENCE

ENGINEERING STUDENT COUNCIL (ESC)   *Irvine, CA*
Tech Director (ReactJS, NodeJS, Firestore, and Google Cloud)   **May 2025 - Present**
- Revamped the website using HTML5, CSS, and JavaScript to **ReactJS** while leveraging Google Cloud Functions and Firestore to store event data. This migration automated various functions, reducing integration time from **1–2 days to 5–10 minutes**.
- Designed and developed a high-performance corporate website for the Engineering Student Council using **ReactJS** for the front end, leveraging **server-side rendering** and code-splitting for optimal load times, and **NodeJS with Express** for the back end.

UCI OFFICE OF INFORMATION TECHNOLOGY (OIT)   *Irvine, CA*
Student Desktop Analyst (Bash/Shell Scripting, GitHub Copilot, Unix Development, Automation)   **Jan 2025 - Present**
- Developed automation scripts and configured **GitHub Copilot** for research teams, using Python and shell scripting to streamline setup and version control. Cut **deployment time by 40%**, improved reproducibility, and enabled AI-assisted coding for faster **prototyping**.
- Delivered IT and development support for **3,000+ users**, troubleshooting complex software, hardware, and networking issues. Collaborated with cross-functional teams to implement AI-driven diagnostics, ensure **SLA compliance**, and maintain high availability.

GOOGLE DEVELOPER STUDENT CLUB   *Irvine, CA*
Software Developer (Android Studio, Figma, Firebase, C++)   **February 2024 - Present**
- Collaborated with Google Developer Student Club (**GDSC**) at UC Irvine to develop a **mobile application** for the GDSC Solution Challenge, enabling community issue reporting with a user-friendly UI/UX and aligning with the **UN's Sustainable Development Goal**.
- Implemented server-side functionality using Firebase, enabling seamless data sharing with local authorities and real-time updates, resulting in a **40% reduction** in issue resolution time and fostering community engagement.

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING   *Jabalpur, MP, India*
Software Engineering Intern (C++, SolidWorks, Microcontrollers, Embedded Systems)   **June 2023 - July 2023**
- Gained proficiency in embedded system design through rigorous coursework, dedicating substantial effort to hands-on lab sessions and developing **2 mini projects** leveraging Arduino, Raspberry Pi, and PIC **microcontrollers**.
- Contributed to a cutting-edge research project funded by the **Science and Engineering Research Board (SERB)** and the **Department of Science and Technology (DST)**, Government of India, developing an innovative computer numerical positioning system for 3D

PROJECTS

Web Search Engine - Information Retrieval Elasticsearch
- **Developed a search engine from scratch**, indexing **50,000+ documents** with an **inverted index and on-disk partial indexing (3-phase merge)**, ensuring **query response times < 300ms** while handling memory constraints without external libraries.
- Implemented IR techniques, including **TF-IDF ranking**, Boolean retrieval, **Porter stemming**, and **tokenization**, while enhancing search relevance with **PageRank**, **HITS algorithm**, and anchor text indexing for improved ranking precision.

OpenGL-Based Terminal Emulator - GLAD, GLFW, FreeType (UNIX/Linux)
- Achieved **GPU-accelerated rendering speeds of 460 FPS** on large text screens, reducing frame draw time to **2 ms** per refresh and freeing up over **80 % of CPU** resources for parallel processing.
- Delivered **50 % faster** text output on datasets exceeding **700K lines**, with smoother scrolling, lower input latency, and reduced system load compared to CPU-rendered terminals.

Chatbot Development - GDSC UCI NLP Project
- Collaborated with the GDSC UCI team to develop an AI-powered chatbot using NLP techniques and AI, contributing to advanced functionalities like context-aware responses, sentiment analysis, and knowledge base integration to enhance user experience.
- Utilized NLTK and machine learning models, achieving **80% accuracy** in understanding natural language queries while fostering a collaborative environment and leveraging industry best practices for continuous improvement.

Flight Data Processing Pipeline - Python SQLite Database
- Developed an advanced Flight Database System using **Python and SQLite3**; optimized database schema to boost data **retrieval efficiency by 35%**, ensuring rapid data manipulation and improved performance for 10,000+ records.
- Enforced data integrity through SQL constraints, indexing, and normalization techniques, achieving low query response times while optimizing performance and ensuring data consistency for accurate and fast access to flight-related information.