Sachita Jnanesh Rayapati

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EDUCATION

University of California, Irvine | B.S. in Computer Science and Engineering GPA 3.25 | March 2025

Deans Honor List: Winter 2025, Spring 2024, Fall 2023

Coursework: Compilers and Interpreters, Computer Networks, Cryptography, Data Structure Implementation and Analysis, Data Structures, Electronic Devices and Circuits, Intermediate Programming, Network Analysis, Organization of Digital Computers.

SKILLS AND CERTIFICATIONS

Programming Languages: Bash, C, C++, CSS, HTML, Java, JavaScript, Python, VHDL

Tools and Frameworks: Agile, APIs, Flutter, Git, Jira, JUnit + Mockito, Mailchimp, ReactJS, TensorFlow Lite

Embedded Systems & Hardware Design: ATmega32, AVR Microcontrollers, Digital Circuit Design, Raspberry Pi

Web Development and UI/UX: API Integration, DOM Manipulation, UI/UX Design

Networking and Embedded Systems Protocols: TCP/IP, DHCP, IPv4, IPv6, I2C, SPI, UART, GPIO

Other Skills & Certifications: Technical Writing, *Mastering Microcontroller: STM32-LTDC, LCD-TFT, LVGL (MCU3)* - Fastbit Embedded Brain Academy

WORK EXPERIENCE

Student Coordinator | *Arroyo Vista, UCI Student Housing, Irvine, CA* 2023-24
- Developed Python & SQLite3 automation scripts to streamline selection processes. *Move-In Opportunity Draw Project*
- Designed WCAG-compliant newsletters and optimized website content through A/B testing to increase engagement.

Website Management | *Ketto - Tara Ayog* 2020-21
- Optimized crowdfunding platform engagement through A/B testing, web optimization, and content strategies
- Managed social media analytics to refine outreach for COVID-19 relief fundraising.

Website Manager Marketing Crew | *TedxYouth@VSA* 2020-21
- Collaborated with client to understand their business objectives and target audience
- Designed a visually appealing, user-friendly design based on user research, design heuristics, and color psychology

PROJECTS

Sleep Quality Monitoring System 2024 - Current
- Developing a real-time sleep monitoring system to analyze snoring, sleep apnea, and environmental disturbances.
- Implementing decibel-based sound analysis and integrating microphones, respiratory sensors, and heart rate monitors to provide actionable sleep insights.

Smart Mirror- Senior Design Project September 2024- March 2025
- Designed an interactive two-way mirror with a Raspberry Pi for system control.
- Developed a responsive UI while integrating Amazon Alexa for voice commands.
- Connected APIs like Spotify and WeatherApp to display real-time data.

Flutter AI Integration Project July 2024
- Integrated TensorFlow Lite for real-time image classification in a Flutter-based application.
- Focused on efficient on-device model inference while optimizing UI/UX for cross-platform performance.

Embedded Systems Audio Media Player March 2024
- Programmed a C-based music player on an ATmega32 microcontroller, featuring keypad-based song selection.
- Debugged microcontroller firmware for real-time audio playback and response accuracy.

Pipelined Accelerated Object Locator November 2022
- Designed a multi-stage pipelined datapath using VHDL, improving object detection and synchronization.
- Developed testbenches to verify clock cycle efficiency and execution timing.

Greedy Ants Hackathon Project | Front End (Website creator and manager) Developer | Irvine, CA February 2022
- Built a recipe search engine using Python, JavaScript, and HTML, enabling real-time recipe generation via API integration.
- Designed an interactive UI to enhance usability and engagement.

LEADERSHIP AND COMMUNITY SERVICE

People Tree Foundation: Tutored 10th and 11th-grade students in Algebra, Pre-Calculus, Python, and Java, helping underprivileged students continue their education during COVID-19. 2019-20

ASHA Foundation: Tracked logistical data for campaign stays, ensuring efficient resource allocation. Assisted in designing awareness campaigns to promote education, child welfare, and healthcare accessibility. 2018-19