Sachita Jnanesh Rayapati

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EDUCATION

University of California, Irvine | B.S. in Computer Science and Engineering   GPA 3.2 | March 2025

SKILLS

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

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

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

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

Platforms: Microsoft Excel, Microsoft Word, Canva, Adobe Acrobat

PROJECTS AND WORK EXPERIENCE

Smart Mirror Senior Design Project (Ongoing)
- Collaborating with a 3-member team to develop a smart mirror platform integrating a Raspberry Pi.
- Designing a responsive UI, leveraging a two-way mirror or transparent display panel.
- Implementing Amazon Alexa for hands-free voice control functionality and working on API integration for real-time data.

Sleep Quality Monitoring System (Ongoing) | *Leveraging sound analysis and sensor data to monitor and improve sleep patterns.*
- Developing a system to detect snoring, sleep apnea, disturbances using decibel monitoring and hyperventilation analysis.
- Integrating microphones, respiratory and heart rate sensors for comprehensive sleep tracking.
- Implementing sound analytics software to generate insights and optimize sleep environment.

Flutter AI Integration Project   July 2024
- Integrated TensorFlow Lite into a Flutter-based app for real-time image classification and data analysis.
- Designed a responsive UI leveraging Flutter's widget library, ensuring seamless cross-platform performance.
- Explored Blockchain/Web3 features to enhance data privacy and app security.

Embedded Systems Music Player   March 2024
- Developed an AVR-based music player in C, utilizing a keypad input system for song selection and frequency modulation.
- Debugged and validated functionality on an ATmega32 microcontroller to ensure real-time response.

Student Coordinator | *Arroyo Vista, UCI Student Housing, Irvine, CA*   2023-24
- Automated random selection processes using Python and SQLite3, managing data across multiple communities.
- Designed WCAG-compliant email newsletters using Canva and Mailchimp, improving accessibility and user engagement.
- Implemented A/B testing on UCI Housing website to analyze call-to-action effectiveness and enhance content strategy.

Pipelined Accelerated Object Locator   November 2022
Architected a multi-stage Pipelined Datapath using VHDL for:
- Constructed a multi-stage pipelined datapath using VHDL, integrating control logic for optimized resource allocation.
- Designed and tested VHDL testbenches to ensure precise data synchronization and clock cycle management.

Greedy Ants Hackathon Project | Front End (Website creator and manager) Developer | Irvine, CA   February 2022
- Developed a recipe search engine in Python, JavaScript, and HTML, dynamically generating recipes from a minimal ingredient set.
- Collaborated on API integration and UI/UX design, boosting user engagement through intuitive layouts and responsive interactions.

Website Manager Marketing Crew | *TedxYouth@VSA*   2020-21
- Led website design and development using JavaScript, HTML, and CSS, aligning with brand identity and user needs.
- Created a ticketing platform to facilitate seamless event registration.

COURSEWORK

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

LEADERSHIP AND COMMUNITY SERVICE

Tara Ayog	Website Manager for a Crowdfunding website	2020-21	**Fuel-A-Dream**	Crowdfunding	2019-20
ASHA Foundation	Data Logging & Campaign Designer	2018-19	**People Tree Foundation**	Tutor	2019-20