Manoj Elango

Passionate creator of applications dedicated to building innovative solutions.

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Education

University of California, Davis
Bachelor of Science in Computer Engineering   Expected June 2025
Relevant coursework: Intro to Programming in C, Object Oriented Programming in C++, Data Structure, Digital and Analog Systems, Distributed Ledger Systems, IOS Development, Fully Distributed Ledger System,

Experience

President | Google Developer Student Club @UCDavis   September 2023 - Present
- Leading one of the largest tech clubs of 27 board members to provide more than 150+ students with tech resources to build projects.
- Creating bootcamps, recruiting tech associates, tutoring workshops and planning tech events in the club.
- All in the field of mobile development (IOS, ReactNative, Flutter, Dart) [Leadership, Team Management]
- Previously Tech Director mentoring teams to build innovative mobile development projects

VP of Software | SacHacks   June 2022 - Present
- Helped to promote and advertise SacHacks through emails and multiple social media platforms and increased the number of the participants in the discord server by around 70+ students.[DiscordPy Bot]
- Worked on building the yearly website for Sachacks and a Discord Bot in Python
- Previously Marketing Associate and Web Developer
- Created Software to host Sachacks 2025 with over 500 members. sachacks.io

Founder and Director | Swift Coding Club@UCDavis   September 2024 - Present
- Creating a community of over 100+ IOS developers to create swiftUI apps.
- Guiding students on AGILE Developments and Startup Product Pitches to create innovate solutions

Jr. Embedded Software Engineer | Ravata Solutions(Startup) @Davis   March 2023 - September 2024
- Worked on STM32 Microcontrollers and communication va UART & SerialInterface in C/C++
- Constructed GUI interface in Python and C# to communicate with Microcontrollers and GCP Buckets.
- Worked on FFT and Improving the live Peak Detection Algorithm and testing features using MatPlotLib.
- Conducted debugging using Ozone and RTT Viewer to identify and resolve issues in the embedded system
- Seamless communication with the MotherBoard to the PC, 3 sensors and 5 pumps to create an automated system.

Open Source BlockChain Researcher | ResilientDB @ UCDavis   September 2023 - Present
- Worked on creating an IOS app that connects directly to the well known open source Apache Certified fully distributed ledger system ResilientDB and part of this organization.
- Continuing to work on improving this software and exploring new features to add. [Docker, Linux, Cloud, GraphQL, ReactNative] https://blog.resilientdb.com/2023/12/17/CrypoGo.html

Personal Projects

IR Based Security System | **Embedded Systems** | SALE Logic, SPI, I2C, AWS
- Developed a home security system using PIR sensors and IR remote receiver.
- Sent alerts via AWS SNS and logged activity to an AWS-hosted database.
- Extensively debugged hardware and microcontroller communication using SALE Logic Analyzer.

Autonomous Vehicle Project | **C\C++, Python, Altium Designer, CAD, OpenCV, Computer Vision**
- Built a line-following robot using an RC car with a custom-designed PCB.
- Implemented computer vision for path tracking. Integrated Verilog logic on a RPi Pico.
- Designed 3D-printable components; extensively tested on Linux subsystems.

Audio Based Music Follower | **System Design** | C\C++, Verilog
- Developed an audio-following system using real-time DSP on embedded hardware.
- Implemented full audio controls and signal-following logic; evaluated system using dev boards.

IVF and Embryo Quality Assurance Tests |**iOT and Embedded**| C\C++, MatLAB, Python, Peak Detection, RTT
- Created a classification tool for embryos using peak detection and real-time testing.
- Analyzed biological data using MATLAB; debugged using RTT in embedded systems.

RPI Pico Controller | **Embedded Systems** | **Python, Hardware Integration, Linux**
- Built a controller system using Raspberry Pi Pico for sensor integration and real-time data processing
- Fully integrated with each other I2C and SPI communications to the board.

SKILLS

Languages - Python, C, C++, HTML5, CSS, Javascript, Flutter and Dart, Lua, R, ReactJs, Svelte
Softwares - Filmora X, Figma, Pico 8, Unity
Tools: Github, Unix, Jira, BitBucket, Firebase, Microsoft Azure, Google Cloud Platform, Jupyter Notebook