

DEV MANEK

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King's College London, London, United Kingdom

September 2024

Candidate for Master of Science in Robotics

SVKM's Dwarkadas J. Sanghvi College of Engineering, Vile Parle, India

June 2023

Bachelor of Technology in Electronics with *Distinction* (CGPA 8.4/10)

PROFESSIONAL EXPERIENCE

Big Vision LLC, Bangalore, India

April 2022– September 2022

Computer Vision Engineer and Technical writer ([website](#))

- Developed computer vision projects centered around human movement tracking using Media-pipe.
- Designed and implemented gesture-based controls for video calls, integrating precise movement tracking.
- Authored SEO-optimized blog posts highlighting these projects, leading to a remarkable 25% increase in website traffic.

Open Robotics, Remote

May 2022– October 2022

Technical writer ([case study](#))

- Rectified the Open-RMF installation documentation and resolved GitHub CI issues related to documentation.
- Seamlessly integrated GitHub-based Q&A into the Open-RMF website for enhanced user support.
- Published comprehensive documentation for the RMF fleet adapter, complete with Python and C++ tutorials for easy comprehension.

MeshNet Electronics, Mumbai

May 2022– May 2023

Embedded Software Engineer

- Developing MISRA C compliant firmware with OTA, Modbus, BACnet and MQTT support for ESP32-based gateway using ESP-IDF.
- Incorporating, testing, and optimizing a software stack for Wi-Fi mesh-based network for intrusion detection using ESP based ADC sensor unit.

ACADEMIC PROJECTS

Semi-Autonomous robots, ABU Robocon

October 2020-June 2021

- Established a robust interface between a Raspberry Pi 4 and an Object Detection Application, enabling a semi-autonomous robot to self-align with objects in its environment. Developed arrow tracking mechanism using TensorFlow.
- Enhanced the synergy between electronic and mechanical components of the robot by integrating an Arduino Due controlled via a PS3 controller. seamless connection between Electronics and Mechanical Components of the bot using Arduino Due controlled using a PS3 controller.
- Diligently managed project expenses and curated a comprehensive item list to maintain project records.

C++ version of library imutils

February 2022-Present

- Converted popular computer vision library imutils from python to C++.
- Streamlined software development using Continuous Integration and Doxygen.

Assistive healthcare soft robot for shoulder

October 2023-Present

- Led a team of four in the development of an innovative Assistive Healthcare soft robot for the shoulder.
- Spearheaded the creation of a sophisticated shoulder tracking and data acquisition system using ESP32-C6, ICM-20948, and Myoware Muscle sensor.

TECHNICAL SKILLS

- Programming Languages: C, C++, JavaScript, Java, Python.
- Libraries and Tools: ROS2, Gazebo, TensorFlow, OpenCV, CMake, Doxygen, Bash, Git, GitHub, Docker, ESP-IDF.
- Software: LTSPICE, KICAD, OrCAD, Proteus, Easy EDA, MATLAB, SCILAB, Tableau, SolidWorks, Fusion 360.
- Hardware: Raspberry Pi, Arduino, ESP32, STM32, Nvidia Jetson Nano and Xavier.
- Protocols: SPI, UART, I2C, BLE, Zigbee, MQTT, WI-FI, Ethernet, Modbus, BACnet, RS232 and RS485
- Microsoft Office Tools: - MS Word, MS Excel, MS PowerPoint.

EXTRACURRICULAR ACTIVITIES

- Orchestrated 35-member team, organized student events, managed inter-chapter communication, secured sponsorships, and oversaw social media presence as IEEE Student Chapter Chairperson.
- Conducted interviews with industry professionals, delivering insights to students through the podcast "[That Side Over There](#)".
- Commenced freelancing on [Fiverr](#), boasting a stellar 5-star rating and collaborating with more than 20 satisfied clients.