SHOVAN SHAKYA

BRINGING IDEAS TO LIFE

5610 Graduate Cir, FL
(001) 8138096496
shovanshakya@usf.edu
momoisgoodforhealth.github.io

EDUCATION

UNIVERSITY OF SOUTH FLORIDA
B.S Electrical & Electronics Engineering, Minor in Studio Art
2021 – 2025, GPA: 3.55

SKILLS

OpenCV, ROS, Git, Flask
PyTorch, Tensorflow
Siemens PLC, Labview
Unity, Blender

Solidworks Electric
Android Studio, Firebase
FL Studio, Dolby Atmos,
Adobe Creative Suite

Programming Languages:
Kotlin, Python, C, C++, C#,
Verilog, VHDL

EXPERIENCE

Professional

Monterey Bay Aquarium Research Institute, Computer Vision Intern
June 2023 – August 2023

- Developed realtime disparity and distance estimation tool from fisheye stereo cameras with accuracy range (+– 300 mm) of 5 meters for desktop and VR.
- Integrated FathomNet YOLOv5 deep sea organism tracking with distance estimation.
- Used Sockets to send realtime frames, and distance information between OpenCV and Unity VR. Integrating OpenCV into Unity using Native Plugins. (C++ DLL)
- Developed pilot–friendly User Interface for VR Unity application.
- Enabled multiprocessing, CUDA and cuDNN for optimal realtime performance.

Universal Creative Orlando, Research & Development Engineering Intern
September 2022 – December 2022

- Developed Unity, C#, Siemens PLC applications for automation, testing and debugging.
- Developed website for file handling using Flask. Initiated and developed BCI and Spatial Audio applications with Emotiv, Matplotlib, Unity, Dolby Atmos and WWise.
- Deployed a project involving a moving prop using stepper motors and Arduino.

University of South Florida, Research Assistant
May 2022 – June 2023

- Developing driving simulation environment using Unity, controlling Motek motion base. Established low latency communication between between client and motion base using NRF24L01 wireless transciever.
- Time series data analysis and prediction using SciKit, Numpy.
- Configured TCP communication between cRIOs using LabView. Integrated VHDL on cRIO FPGA. Verified and tested project involving calculating impedance using Oscilloscope, TI C2000, RPI4 Microcontrollers and Matlab.

Projects

Student Unmanned Aerial Systems + BMES Robotics, Software Lead
January 2022 – Present

- Assembled a robot that follows a dark tape using IR sensors, object avoidance using Ultrasonic sensors.
- Developing webserver for displaying info, computer vision for raspberry pi in drone.
- Programmed robot for autonomous victory in Vex Robotics State Championship.

USF FSAE + NASA Student Launch, Electrical Team Member
October 2021 – Present

- Developed Schematic design for engine harness along with testing gauges.
- Developed a 6 capacity battery box for storing and charging during competiton.
- Used Arduino and ROS in Nvidia Jetson to connect with LoRA module for data transmission for NSL Rocket and ground station.
- Soldering, wiring, welding batteries & components for IEEE Electrathon electric car.

RELEVENT COURSE

EEL4774 – DATA ANALYTICS
Evaluated diverse machine learning models – linear regression, MLP, K–means, DNNs (CNN, TransformerVision) – to maximize accuracy using the given dataset.