# Nikhil Sudhan J

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#### **About Me**

I'm an enthusiastic and curious individual passionate about hacking, mechatronics, and everything tech. I love what I do—and I do what I love. Always eager to explore, learn, and build, I enjoy connecting with like-minded people and working on exciting, meaningful projects that push boundaries.

#### Education

# **Kalasalingam Academy of Research and Education**, Computer Science and Engineering

Expected April 2026

Engineering

• GPA: 7.02/10

• Coursework: Natural Language Processing, Computer Networking, Penetration Testing

# Experience

Software Engineer Intern, Sonata Software - Chennai, CA

May 2024 – June 2024

- Developed an OCR pipeline using Tesseract for structured text extraction.
- Collaborated in a 3-member team to optimize document processing speed by 25

Software Engineer Intern, Wipro -Bangalore, WA

May 2023 - June 2023

- Containerized Web Applications Deployed using Kubernetes on cloud clusters in Google Cloud Platform.
- Implemented GitOps workflow for automated CI/CD pipeline.
- Wrote deployment and scaling scripts to improve uptime and reduce manual effort.

### **Projects**

#### Video Face Manipulation Detection Through Ensemble of CNNs

- Trained ensemble models (ResNet and MesoNet) on the FaceForensics++ dataset.
- Achieved 92 percent accuracy on validation set by applying preprocessing and augmentation.

#### **Autonomous Drone**

- Designed and built a GPS-enabled drone with ArduPilot and Mission Planner.
- Configured waypoint-based autonomous navigation using the MAVLink protocol.
- Calibrated sensors and tuned PID values for stable flight.

## **AI-integrated UAV Aerial System**

- Designed a simulation environment in ROS2 to visualize UAV flight paths.
- Processed user input through the SQLite + OpenAI API to trigger drone actions in simulation.
- Generated GeoJSON paths and visual feedback for mission planning.

### Name Drop for Android

- Developed a Flutter application simulating iOS's NameDrop feature, compatible with both iOS and Android platforms.
- Enabled communication with contacts via NFC, Bluetooth, and ultrasound in mobile devices

#### Skills

Security Tools: Wireshark, Burp Suite

Programming Language: Python, C, C++, Flutter, SQL

**Cloud & DevOps:** Google Cloud Platform, Kubernetes, Git, GitOps, CI/CD **Robotics Simulation:** ROS2, MAVLink, ArduPilot, Mission Planner, Gazebo

Others - 3D Modeling (Fusion 360), Linux, OpenAI API