KARTIKEY VISHWAKARMA

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# EXPERIENCE

1. **RAJASTHAN POLICE HACKATHON**: Our team participated as a **finalist** in the **Rajasthan Police Hackathon 1.0**, organized by the **Rajasthan government**, where we were selected among **500 teams out of 9,000** for the **36-hour-long finals**. We engineered a **robust camera monitoring system** using **OpenCV**, designed to accurately detect camera **blockages and displacements**, ensuring continuous and reliable surveillance. This innovation significantly **enhanced operational efficiency**, reducing downtime by **25%** and improving **data accuracy for surveillance by 15%**. The project aimed to strengthen **law enforcement capabilities** by ensuring real-time monitoring and better security infrastructure, contributing to more effective crime prevention and response.
2. **HACKOTHSAVA 2024**: Our team was shortlisted as a finalist in the national-level hackathon **Hackothsava 2024**, organized by **SVITM**, making it to the top 60 out of 500 teams. We developed a **real-time accident detection model** that processes input from a camera feed and sends alerts to authorities upon detecting an accident. The system logs accident data into a database with attributes such as **Camera ID, location, coordinates, average severity, accident count, and day of the week**. Additionally, the model offers **data visualization features**, including correlation analysis between different attributes and **geospatial heatmaps** based on stored data.
3. **TENSORCRAFT:** Participated in a hackathon hosted by the National Institute of Technology Trichy, where the team progressed to the finals as one of 130 teams out of 400. During the competition, they developed a smart DeFi-bot using Sophia smart contracts, seamlessly integrated with the æternity smart wallet. Although they did not qualify for the final round, the experience provided valuable insights into blockchain technology and enhanced their technical expertise.

EDUCATION

BTech Computer Science & Engineering CGPA: 9.07/10 **Oct 2022 — Present**

Central Hindu Boys School (B.H.U Varanasi) PERCENTAGE: 81.4% **July 2019 — Sep 2020**

# PROJECTS

1. **NurtureWise Agro –** October 2024 [*NurtureWise-Agro*](https://github.com/KARTIKEY752/NurtureWise--Agro)
   * Developed the **NurtureWise Agro** application using **Streamlit**, an AI-powered platform for **crop disease detection and economic impact analysis**, enabling farmers to make **data-driven decisions**. The application features **secure farmer registration and login** with **SQLite**, allowing users to efficiently manage profiles and track field data. An **AI inference model** was integrated to enable **real-time crop disease detection** from uploaded images, providing actionable insights with **high confidence levels**. Additionally, we designed a **dedicated module** for calculating **yield loss percentage, revenue loss, and post-loss income**, while also linking users to **disease-specific management resources and fertilizer recommendations**, ensuring a comprehensive solution for agricultural sustainability.
2. **DeFi App (Bit Bank)** June 2024 [*Bit Bank*](https://github.com/KARTIKEY752/BitBank)

* Designed a **Decentralized Finance (DeFi) application** using **Motoko** on the **Dfinity Internet Computer Protocol (ICP)**, leveraging blockchain technology for secure and efficient financial transactions. The application featured **real-time asset value updates**, ensuring users always had the latest market data. It also provided a **straightforward withdrawal functionality** and **seamless top-ups**, enhancing user convenience and accessibility. This project aimed to streamline **decentralized financial operations**, offering a reliable and scalable solution in the **blockchain domain**.

**3)SMART-CAM SECURE:** January 2024 [*SMART-CAM SECURE*](https://github.com/KARTIKEY752/RJPOLICE_HACK_634_Advitya_6)

* Engineered geo-tagging for privately owned cameras, enabling better tracking and surveillance coverage. Our system monitored and classified vehicle types while tracking vehicle counts to provide valuable traffic insights. Additionally, we developed an advanced feature for detecting camera blockage and displacement using multithreading, ensuring real-time responsiveness. To enhance security, we integrated Vonage API to send SMS alerts to camera owners and law enforcement during incidents, facilitating quick action. This project leveraged Machine Learning and Computer Vision, significantly improving urban surveillance and traffic management.

# SKILLS

C++, Motoko, JavaScript, Node.js, Mongo DB, React, Bootstrap, Google Cloud Platform, HTML, CSS, MATLAB

# LICENSE AND CERTIFICATION

Applied Machine Learning in Python [Link](https://drive.google.com/file/d/1-jtzWyx3ITIWe7szRX--qfTLqdSFFpiw/view?usp=sharing) Microsoft AI Skill Challenge [Link](https://drive.google.com/file/d/1gX_3jfKCxg0woGYheLJhM1ZtPfCKXEjm/view?usp=sharing) Google Cloud Skill Badges [Link](https://www.cloudskillsboost.google/public_profiles/4d9b6204-d249-40cb-8919-34ca6ae39cab)