Rishul Gupta

Gurgaon, India rishulguptaofficial@gmail.com +91 9212548716
linkedin.com/in/rishul-gupta-7a0750299/ github.com/RishulGupta

Education

National Institute of Technology, Kurukshetra, Aug 2023 – Present
B.Tech in **Information Technology**

Skills

Languages: C/C++, Kotlin, Python, Java

Frameworks: XML, Jetpack Compose

Databases and Architecture: RoomDB, Firebase, MVVM

API and Libraries: RESTful APIs, Retrofit

Technologies: Machine Learning, Deep Learning, ONNX, TensorFlow, PyTorch, IoT, ESP32, Arduino, NodeMCU,

Experience

Hackathon Participant, Smart India Hackathon (Semi-Finalist)

- Accomplished an innovative SAR image colorization model using Deep Learning to enhance remote sensing analysis.
- Designed and trained a custom model leveraging SAR-Optical image pairs, optimizing predictive accuracy.
- Implemented advanced preprocessing techniques and adapted tailored evaluation metrics to improve usability.
- Collaborated with a multidisciplinary team to refine the deployment pipeline and optimize inference speed.

Projects

Smart Bike Helmet App github.com/RishulGupta/SmartBikeHelmet

- Engineered an IoT-enabled helmet hardware with crash detection, live SOS messaging, and hands-free calling.
- Developed an AI-powered accident prediction system using real-time sensor data stored in Firebase Realtime Database to anticipate collision risks and provide proactive alerts.
- Designed an intuitive mobile app with Firebase Authentication for secure user access, enabling real-time monitoring, user alerts, and emergency contact management.
- Integrated Maps for route assistance and refined app-to-hardware communication using Firebase Realtime Database for seamless IoT functionality.

AI-Based Image Processing System (Ongoing)

- Developed a deep learning model utilizing TensorFlow and ONNX to enhance image recognition capabilities.
- Implemented and optimized neural networks to improve classification accuracy.
- Explored various machine learning techniques to refine object detection models.
- Evaluated model performance using advanced metrics, ensuring high precision and recall.