



Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:

Ministry of Defence

PS Code: SIH**1418**

Problem Statement Title:

Deep learning for terrain recognition

Team Name: GrowGuards

Team Leader Name: Uzzma Saiyed

Institute Code (AISHE): C-58356

Institute Name:

Faculty of Computer Applications and IT

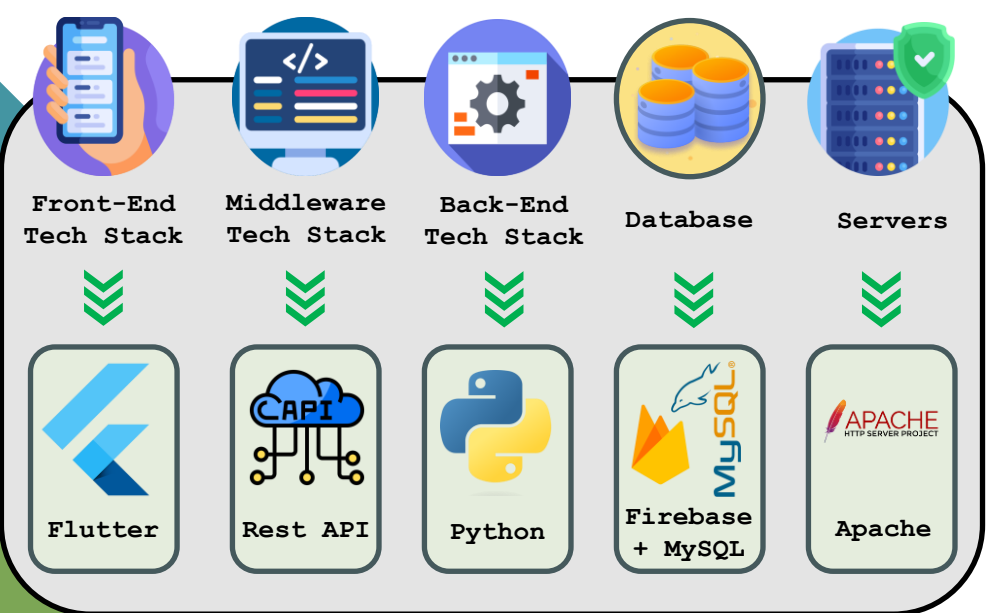
Theme Name: Miscellaneous

Idea/Approach Details

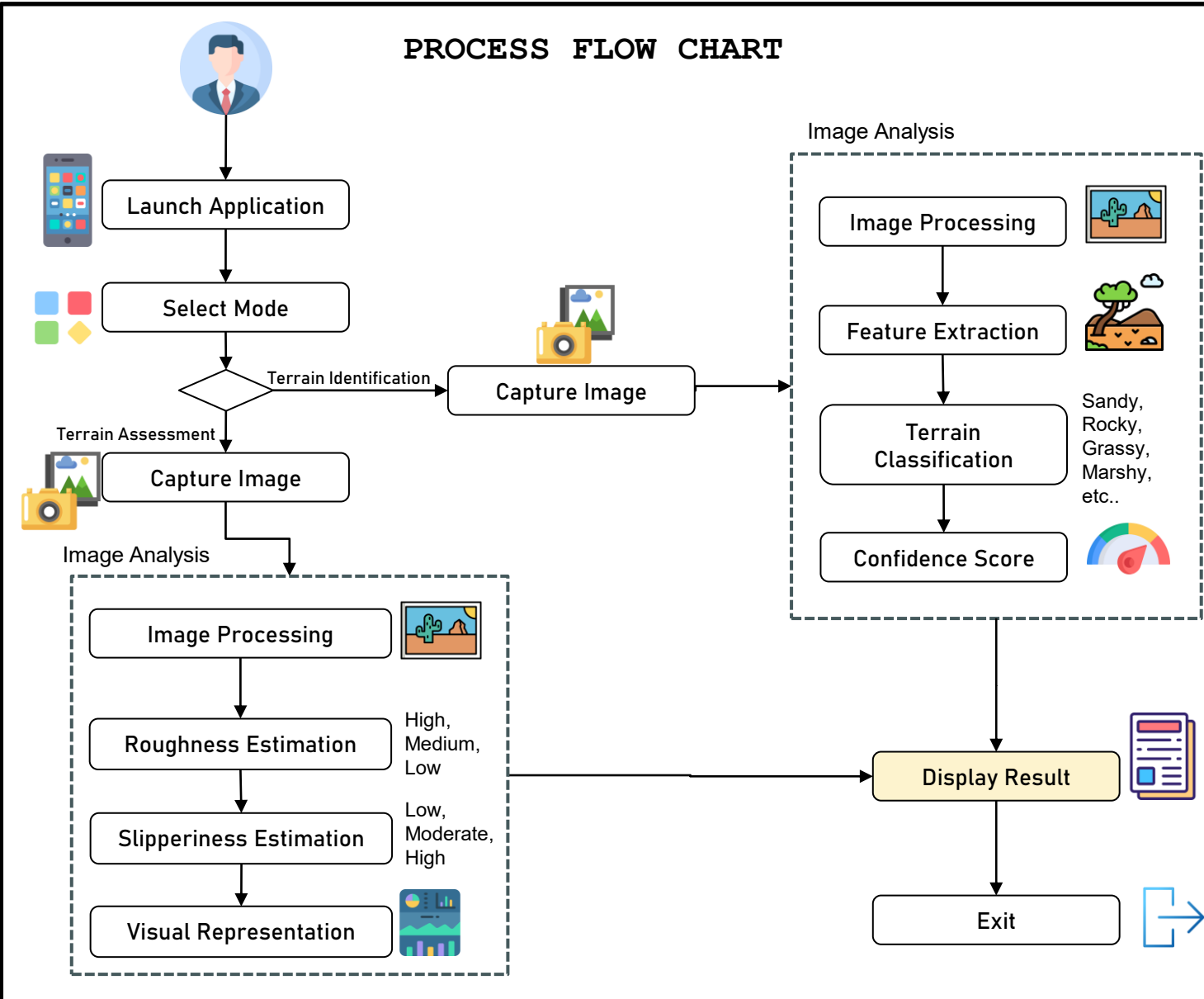
IDEA DESCRIPTION:

Presenting app base solution that uses AI to instantly identify and assess terrain types, roughness, and slipperiness. It is a valuable tool for outdoor adventures, military operations, and environmental monitoring, empowering users with critical terrain insights for safer and more informed decision-making.

TECHNOLOGY STACK

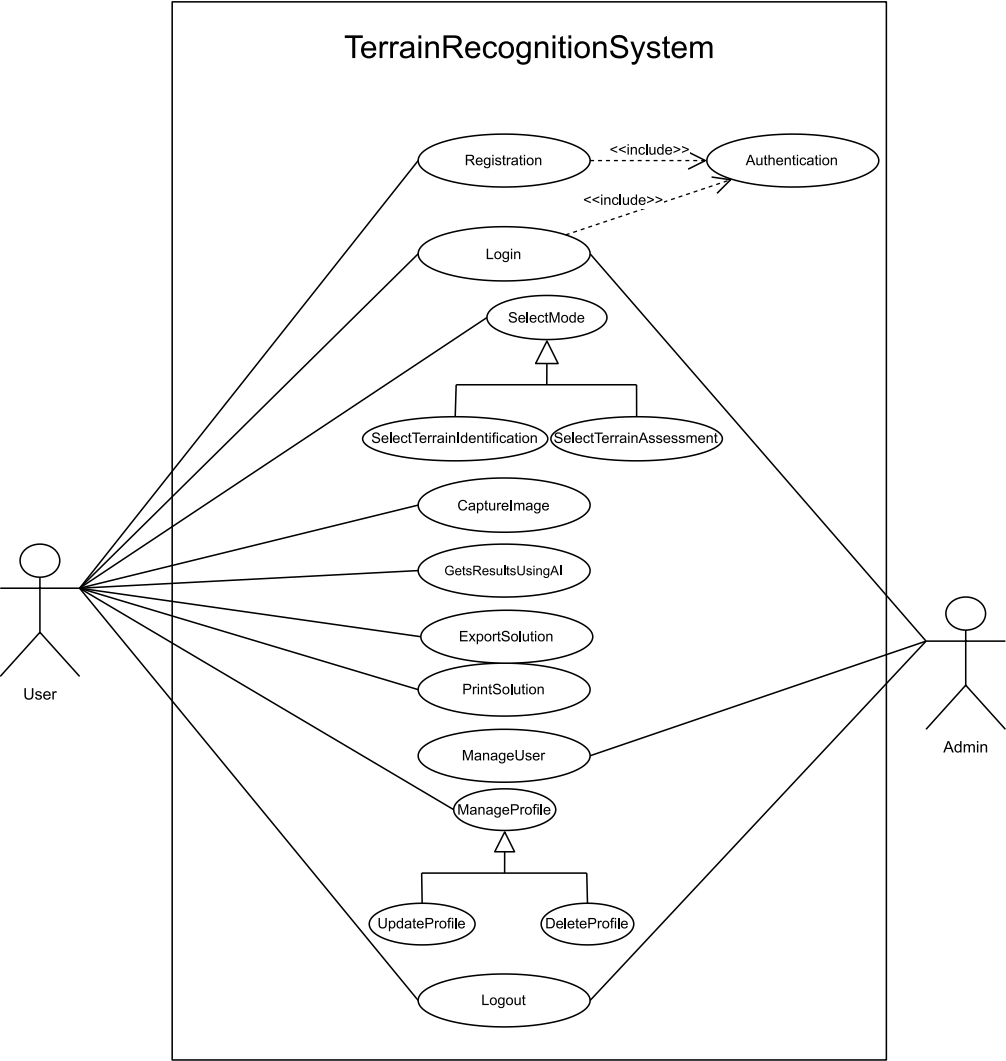


PROCESS FLOW CHART



Idea/Approach Details

Use Case



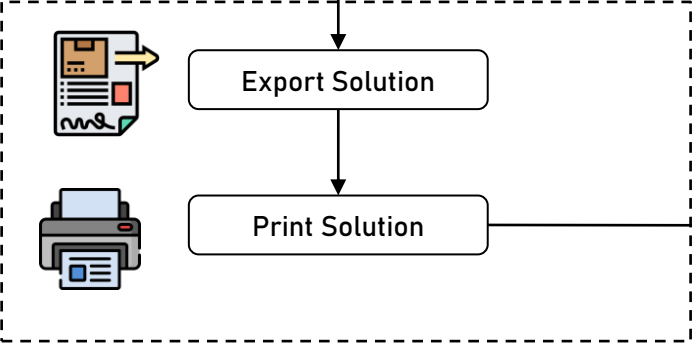
SHOW STOPPER

- ✓ Difficulty in measuring implicit quantities data, such as roughness and slipperiness.
- ✓ The need to develop a user-friendly and efficient mobile app interface.
- ✓ The need to optimize the deep learning model for performance on mobile devices.
- ✓ The need to ensure the accuracy and reliability of the terrain recognition system.



Results

Display Result



Dependencies

- A large and comprehensive dataset of images and implicit quantities data for different types of terrain.
- Access to computing resources for training and deploying the deep learning model.
- Expertise in deep learning and mobile app development.

Team Member Details

Team Leader Name: UZZMA SAIYED

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I**

Team Member 1 Name: SMIT JOSHI

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I**

Team Member 2 Name: TEJASV MODI

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I.**

Team Member 3 Name: KHUSHI LODHA

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I**

Team Member 4 Name: DIGVIJAY JAKHANIYA

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I**

Team Member 5 Name: VISHVA RAVAL

Msc.

Stream (ECE, CSE etc):

Year (I,II,III,IV): **I**

Team Mentor 1 Name: PROF. RACHANA CHAUDHARI

Category : **Academic**

Expertise: **Web and Mobile Development**

Domain Experience (in years): **9**