DEPARTMENT OF APEX INSTITUTE OF TECHNOLOGY

# PROJECT PROPOSAL

## 1. Project Title: -

**Motion identification with artificial intelligence techniques**

## 2. Project Scope: - (Max 500 words)

The project aims to develop a robust and efficient motion identification system using artificial intelligence techniques. Motion identification has numerous applications in various fields, including surveillance, healthcare, robotics, and sports analysis. The project's scope encompasses the design, development, and validation of an AI-powered system capable of accurately detecting, classifying, and tracking different types of motions in real-time.

**The primary objectives of this project are:**

* Design and implement a motion dataset collection setup using sensors, cameras, or other relevant devices.
* Develop and train machine learning models to recognize and classify various types of motions, such as walking, running, sitting, standing, and gestures.
* Integrate motion tracking algorithms to enable the system to follow and predict the trajectory of moving objects.
* Create a user-friendly interface that provides real-time visualization of detected motions and their classifications.
* Evaluate the system's accuracy, precision, recall, and computational efficiency through rigorous testing and validation.

**Project Phases:**

Phase 1: Data Collection and Preprocessing

Phase 2: Model Development

Phase 3: Motion Tracking Integration

Phase 4: User Interface and Real-time Visualization

Phase 5: Testing and Validation

Phase 6: Documentation and Reporting

## 3. Requirements: -

* Hardware Requirements

1. Sensors or Cameras
2. Graphic Processing Unit (GPU)

* Software Requirements

1. Development Environment

2. Machine Learning Libraries

**STUDENTS DETAILS**

|  |  |  |
| --- | --- | --- |
| **Name** | **UID** | **Signature** |
| Anoop Sethi | 21BCS6695 |  |
| Anmol Malik | 21BCS5335 |  |
| Arya | 21BCS7457 |  |

**APPROVAL AND AUTHORITY TO PROCEED**

We approve the project as described above, and authorize the team to proceed.

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| --- | --- | --- |
| **Name** | **Title** | **Signature**  **(With Date)** |
| Mahadev(E13868) |  |  |