**ISRO Video Classifier**

**A Major Project Synopsis Submitted to**

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**Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal**

**Towards Partial Fulfillment for the Award of**

**Bachelor of Technology**

**(Computer Science and Information Technology)**

**Submitted By**

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**Name 3(enroll. No)**

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**Under the Supervision of:**

**Dr Shilpa Bhalerao**



**Department of Computer Science and Information Technology**

**Acropolis Institute of Technology & Research, Indore**

**July-Dec 2022**

**Project Proposal:** ISRO Video Classifier

**Project Category:**

AI/ML/DL based

**Problem Statement:**

Video documentaries of various ISRO missions and programs are available. To categorize the all-video programs, generation & verification of huge amount of metadata generation need to be done. With current Deep learning methods-based development in field of Computer vision and Natural Language Processing this task of video metadata generation is now days automated.

**Scope (100 words)**

**Specific Objectives:**

Video programs and process for objects, text, speech recognition, Named Entity recognition etc has been made available by ISRO. This project will classify the videos in different categories like launch programs, interviews, educational programs, outdoor shots, public shots, traffic etc.

**Stake Holders of Project**

Anybody who wants to know about ISRO missions or any mission related information.

**Background:**

The video content needs to be analyzed for prediction its class in different purpose for the users. Many machines learning approach has been developed for the

classification of video to save people time and energy. Video can also be classified using Object detecting mechanism which can me implemented using Machine Learning algorithms. In this project we are also going to use deep learning approach for this video classification. The video data will be based on ISRO's(Indian Space Research Organization) missions. Our task is to classify those videos into different categories such as whether they are related to education or any space missions etc. After the successful completion of this project any user who want to know what the different video is about, can easily understand the purpose of the video because it has been classified to its category.

**Review of Literature:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Title** | **Reference** | **Date and year of publication/release of project** | **Features** |
| ISRO video classifier | Google, and our college website | -------- |  |

**Whether the Implementation and deployment of the project idea (yes/no)**

a) Has Social benefits.------------ YES

b) Has Environmental Benefits----------- YES

c) Considers health, safety, legal and cultural issues -------- YES

d) Considers sustainable development (economic development that is conducted without depletion of natural resources)------------ YES

e) Applies ethical principles while selecting project (not to steal other’s project idea, code and documents)----------- YES

f)Commits to professional ethics and responsibilities and norms of the engineering practice.-------- YES

g) Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools-------YES

h) Identify, formulate, review research literature, and analyze engineering problems reaching substantiated conclusions.----------------YES

**Technological know-how required for proposed project idea:**

Software : - Visual Studio Code , Pycharm

Hardware : - Updated System

**Key Personnel and their expertise**

|  |  |
| --- | --- |
| **Student Name and Enrollment No.** | **Technical Expertise** |
| Aayush Panchal(0827EC191001) | *Python* |
| Rahul Kumawat(0827CI191048) | *Python* |
| Yash Rane(0827CI191069) | *Python* |

**Proposed Timetable**

|  |  |  |
| --- | --- | --- |
|  | **Description of Work** | **Expected no. of weeks to complete the module** |
| **Module One** | Object Detection | 4 weeks |
| **Module Two** | Video Classification | 5 weeks |
| **Module Three** | Deployment | 4 weeks |

**Project Benefits:**

1.It is user friendly which will give information about ISRO missions at one place.

**References**

Google , Mentors Guide and suggestion.

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