G. PULLA REDDY ENGINEERING COLLEGE (Autonomous): KURNOOL
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
B.TECH VIII SEMESTER (SCHEME 2020); AY: 2023-24
INTERNSHIP
REVIEW- 1 REPORT (FEB 2024)

Roll Number	:	209X1A0581
Student Name	:	N.P.Ujwala
Class	:	B. TECH VIII SEM, CSE – B
Internship Company / Organization details	:	AICTE Slash Mark
Guide Name (GPREC CSE Faculty)	:	K.Bala Chowdappa

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I. About the Internship company

Slash Mark is an AICTE affiliated organization that provides internships for students to elevate the future of students in their interested domains.

At Slash Mark, our mission goes beyond traditional education. We are dedicated to nurturing the next generation of talent through a comprehensive 4-month internship program that includes three tasks Basic, Intermediate and Advanced project-based experiences. Upon successful completion of the internship, each intern is required to prepare and submit a presentation.

Upon verification of their work, interns will receive a prestigious completion certificate to acknowledge their valuable contributions. But our commitment doesn't end there. We believe in recognizing excellence. For those interns who truly shine during their internship, we take an extra step by providing a coveted letter of recommendation and special gifts as tokens of our appreciation.

SLASH MARK is devoted to enhancing engineering education and life skills, and we are unwavering in our commitment to making quality education more affordable and accessible to all.

Additional resources:

- Slash Mark website: https://slashmark.cloud/
- Internship Domain: https://slashmark.cloud/course.html
- Intern Login: https://slashmark.cloud/login1.php
- Slash Mark Internship - LinkedIn: https://www.linkedin.com/company/slash-mark/

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II. Introduction about the course/Technology

In the ever-evolving landscape of technology, Artificial Intelligence (AI) stands at the forefront, catalyzing transformative changes across industries. As an intern, my immersion into the realm of AI has been both enlightening and invigorating.

Artificial intelligence (AI) is the ability of machines to replicate or enhance human intellect, such as reasoning and learning from experience.AI is one of the fascinating and universal fields of Computer science which has a great scope in future. AI holds a tendency to cause a machine to work as a human. AI has become a big deal, especially in areas like healthcare, finance, and entertainment.

It aims to develop systems that can perform tasks that typically require human intelligence.

1. **Problem Solving and Decision Making:** AI systems can analyze complex data, identify patterns, and make decisions or predictions based on that analysis. This capability is particularly useful in fields like finance, healthcare, and logistics.
2. **Natural Language Processing (NLP):** AI enables computers to understand, interpret, and generate human language in a way that is both meaningful and contextually appropriate. This is the technology behind virtual assistants like Siri, Alexa, and Google Assistant.
3. **Computer Vision:** AI algorithms can interpret and understand visual information from images or videos. This has applications in fields such as autonomous vehicles, medical imaging, and surveillance.
4. **Machine Learning (ML):** ML is a subset of AI that focuses on building systems that can learn from data, identify patterns, and make decisions with minimal human intervention. Techniques like supervised learning, unsupervised learning, and reinforcement learning are commonly used in ML.

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III. Units/Modules details

Slash mark offers an Artificial Intelligence internship program that teaches you the essential skills and technologies needed to build modern AI projects. They have provided a roadmap for Interns to complete the projects, which includes learning materials required to complete the projects. The following tasks are included in the road map that the slash mark provides:

Basic Level:

- **Project 1: Sentiment Analysis**
    - Sentiment analysis is a popular task in natural language processing. The goal of sentiment analysis is to classify the text based on the mood or mentality expressed in the text, which can be positive negative, or neutral.
    - It focuses not only on polarity (positive, negative & neutral) but also on emotions (happy, sad, angry, etc.). It uses various Natural Language Processing algorithms such as Rule-based, Automatic, and Hybrid.
- **Project 2: Dogs vs Cats Classification**
    - Dogs vs. Cats classification is a common problem in Deep Learning, especially in computer vision. The main goal is to create a model that can accurately tell if a given image has a dog or a cat. This task is a typical example of binary image classification, where the computer learns to recognize important visual features for each animal.
    - We use Convolutional Neural Networks (CNNs) for this. These are like special programs that are good at understanding details in pictures. They're especially useful for tasks like figuring out if there's a dog or a cat in a photo because they can spot unique patterns and shapes.
- **Project 3: Combat online Plagiarism Checker**
    - A plagiarism checker is a tool or software designed to identify and detect instances of plagiarism in written content. It analyzes a given text and compares it against a vast database of academic papers, articles, websites, and other sources to determine if any portions of the text match existing content.

- These tools are widely used in academic institutions, businesses, and online content creation to uphold ethical writing standards and prevent the unauthorized use of others' work.

Intermediate Level:

- **Project 1: Credit Card Fraud Detection**
  - A Credit Card Fraud Detection ML project involves using machine learning to build a model that can automatically identify fraudulent transactions in credit card transactions. The goal is to detect unusual patterns or behaviors that may indicate unauthorized or fraudulent use of a credit card.
  - By leveraging machine learning, this project contributes to enhancing the security measures associated with credit card transactions, protecting both financial institutions and consumers from unauthorized and fraudulent activities.

Advanced Level:

- **Project 1: AI-Powered Indoor Obstacle Avoidance**
  - Create intelligent systems using AI to navigate indoor spaces while detecting and avoiding obstacles. These systems enhance safety and autonomy for robots, drones, and smart devices in confined environments.

IV. Details of Internship work done till date

Slash Mark provided us with a structured internship program comprising three distinct assignment levels, each featuring three projects at the foundational level. Within this framework, we successfully completed tasks associated with each project. During this period, I have worked on three projects (basic level). The following is a detailed description of our accomplishments in each project:

Project 1: Sentiment Analysis

- Sentiment analysis is a popular task in natural language processing. The goal of sentiment analysis is to classify the text based on the mood or mentality expressed in the text, which can be positive negative, or neutral.

- In this project we took reviews of a restaurant on food based on which we predict a review is positive or negative. This helps the restaurant by giving better insights into the food at their restaurant.
- Tools used: Jupyter Notebook
- Skills required: Python, NLTK (Natural Language Tool Kit)
- Dataset used: Restaurant_reviews.tsv

Project 2: Dogs vs Cats Classification

- The main goal is to create a model that can accurately tell if a given image has a dog or a cat. This task is a typical example of binary image classification, where the computer learns to recognize important visual features for each animal.
- Tools used: Google Colab
- Skills required: Python, Deep Learning-CNN
- Dataset Used: kagglecatsanddogs_5340.zip

Project 3: Combat Online Plagiarism Checker

- A software program or tool used to find and identify instances of plagiarism in written material is called a plagiarism checker. It examines a text and finds out if any of the text matches previously published material by comparing it to an extensive database of scholarly papers, journals, websites, and other sources.
- Tools used: Jupyter Notebook
- Skills Required: Python, NLTK (Natural Language Tool Kit)

V. Assessments/Projects etc., completed details

We are informed that they will conduct three assessments in total during the internship period. And till now two tests have been conducted. The first assessment is theoretical regarding basics of AI and ML.I have scored 100 out of100 in this test.

The second assessment is regarding aptitude. I have scored 92 out of 120 in this test. As Slash mark's internship program is project-based, we are instructed to work on projects we have been assigned.

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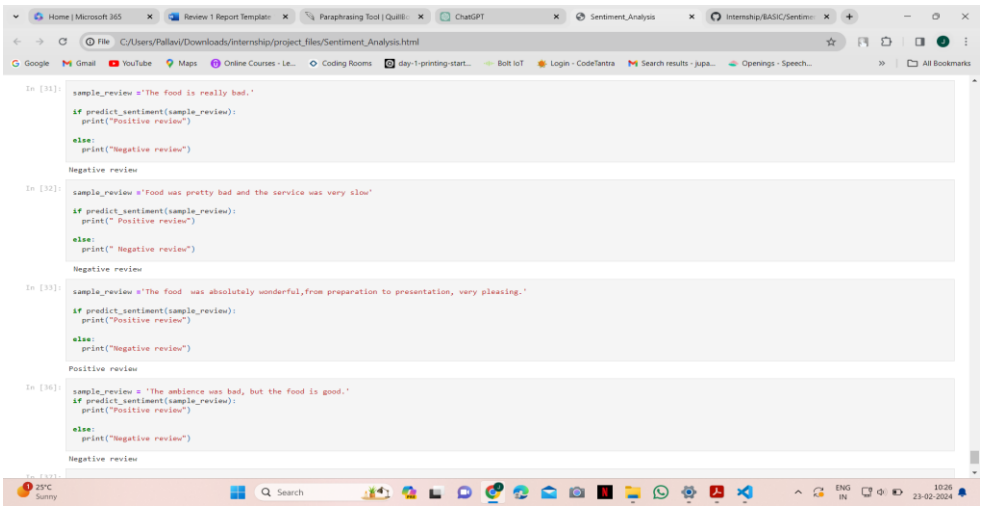
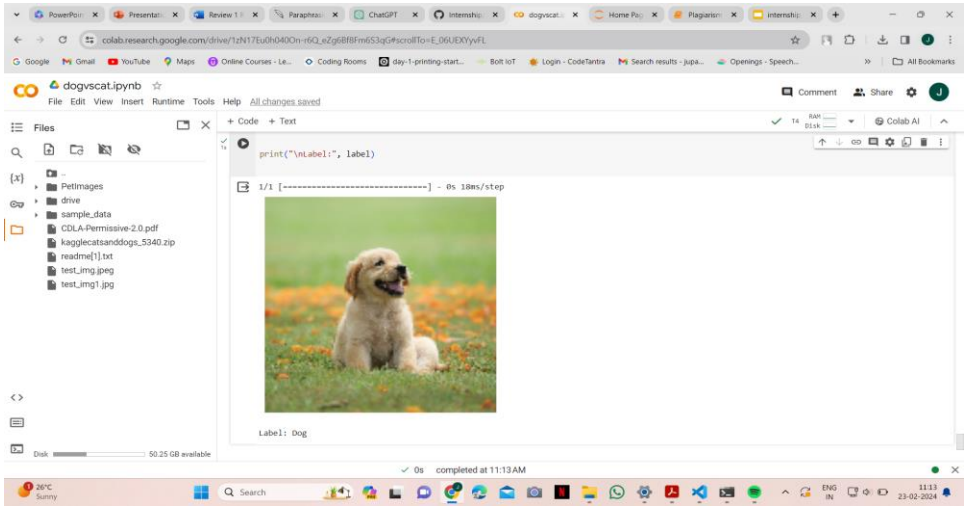
Completed Projects details:

Output 1:



Sentiment Analysis

Output 2:



Dogs' vs Cats

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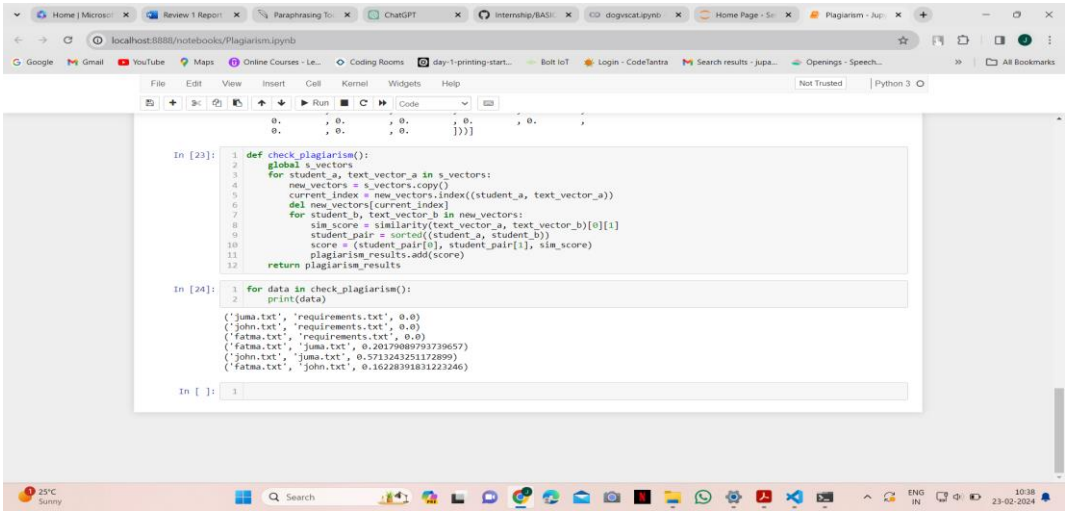
Output 3:



Plagiarism Checker

Additional Resources:

Sentiment Analysis:
https://github.com/npujwala/sentiment_analysis_project

Dogs' vs Cats Classification:
https://colab.research.google.com/drive/1OAl4xC1juRW9LeyxmJrRV7jztBj9XeQ2

Plagiarism Checker:
https://github.com/npujwala/plagramism_checker

Signature of the Student
N.P.Ujwala

Signature of the Internship Guide
K.Bala Chowdappa

Assistant Professor

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