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## ADITYA RAJ PRATAP SINGH

(Software Development / ML)

### SUMMARY

Final year Computer Science & Engineering student with a passion for software development and problem-solving. Experienced in project-based learning with a focus on Machine Learning. Proven ability to work collaboratively with a team. Actively seeking internship opportunities to leverage skills in a dynamic tech environment. Open to exploring new challenges and eager to contribute to innovative projects

### KEY SKILLS

- Machine Learning
- Software Development
- Artificial Intelligence
- Mobile Game Development

### TECHNICAL SKILLS

- TensorFlow
- Python
- Keras
- FastAPI
- Linux
- Sci-Kit Learn
- MongoDB
- Unity2D
- SQL/MySQL
- C#
- Kotlin
- AWS EC2

### EXPERIENCE

#### Artificial Intelligence Intern

CollegeTips Ed. Tech. Media Pvt. Ltd.

Jul '2024

- Completed a 1-month internship focused on machine learning and artificial intelligence
- Assisted in developing a DeepLearning model to identify whether a text is AI-generated or written by human
- Gained hands on experience in building ML pipelines

### PROJECTS

#### Predictions using KNN and ResNet50

- Created a ML pipeline to predict the length of products in a catalogue using their image and description
- Trained on a dataset of 260,000 images
- Used ResNet50 to extract features from the images
- Scaled the features and other parameters and performed predictions using KNeighboursRegressor
- Reached a F1 accuracy score of 0.6

## **ID Detection Automation Project**

- To keep track of people entering a building with or without an ID
- Created a dataset of more than 10,000 images of specific ID cards to train YOLOv8 detector
- Performed performance analysis to find optimal parameters
- Used a live camera's feed for prediction
- Predicted all classes with an F1 score of 0.82 at 0.8 confidence

## **Text Sentiment Analysis Project**

- To classify text into classes of sentiments based on emotions
- Created an NLP model using TensorFlow libraries
- Utilized a dataset of more than 400,000 sentences labelled into 6 classes
- Performed performance analysis on the model to find optimal parameters
- Reached a validation accuracy of 0.8 and a validation loss of 0.23

## **A CAPTCHA providing service with dataset labelling**

- Provided a CAPTCHA service to other websites and collected human responses as possible labels
- Created a FastAPI server to communicate with the MongoDB Atlas database and a web UI
- Utilized AWS EC2 to virtually run the FastAPI uvicorn server
- Created endpoints for generating and analyzing CAPTCHA
- Used OAuth2 authentication for secure connection between site and server
- Used the labels to create a fully labelled dataset of the CAPTCHA images

## **Android Application**

- To deliver 'Short News Cards' of country specific news to stay informed
- Delivered ad-free, smart and concise news summaries
- Used the NewsAPI to fetch recent articles, stored then in an SQLite database using the Room library in Kotlin
- Manipulated data and then created an android app using Kotlin in android studio

## **EDUCATION**

### **B.Tech (Computer Science and Engineering)**

Aug '2021 - Jul '2025

RKGIT, Ghaziabad

## **CERTIFICATIONS**

- TensorFlow Developer Professional Certificate | DeepLearning.AI
- Introduction to TensorFlow | DeepLearning.AI
- Convolutional Neural Networks in TensorFlow | DeepLearning.AI
- Natural Language Processing in TensorFlow | DeepLearning.AI
- Sequences, Time Series and Predictions | DeepLearning.AI
- Machine Learning for All | University of London