(+91) 99886-21069
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Tanvir Singh

github.com/logic-404
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Education

B.Tech in Computer Science - *Guru Nanak Dev University, Amritsar* Oct. 2020 - Present
CGPA - 8.35
Senior Secondary - *Army Public School, Amritsar* 2018 - 2020
Percentage - 94.8
Matric - *Army Public School, Amritsar* 2016 - 2018
Percentage - 87.8

Skills

Programming Languages C++, Python, Java
Web Development Technologies HTML / CSS, JavaScript, NodeJS, ExpressJS, Ejs
Machine Learning Technologies Tensorflow, NLP, Sentence-Transformers
Database Management Technologies MySQL, MongoDB
Microsoft Office Word, Excel, Powerpoint

Projects

Jokes Apart **Sept. 2022 - Apr. 2023**
GitHub HuggingFace Space Web
Jokes Apart is an AI-powered joke generator. This project has been developed using various technologies and frameworks such as Python, HuggingFace Datasets, Sentence-Transformers, Gradio UI, Flask web application framework, and Gevent. Below are the key highlights of the project:

- Trained the model using the snli and mnli datasets.
- Used the sentence-transformers and datasets modules for data processing.
- Fine-tuned the pre-trained BERT model on the concatenated dataset using the multiple negatives ranking loss.
- Created a Gradio UI to interact with the model. The UI allows users to enter a query, and the model generates a joke based on the input query.
- Deployed the model as a Flask web application using Gevent for production-level scalability.
- **Technologies used:**
  HuggingFace Datasets, Sentence-Transformers, Gradio UI, Flask, Gevent

ProjectFeeder **Oct. 2021 - Dec. 2021**
GitHub HuggingFace Space Web
A machine learning solution to detect and diagnose leaf diseases in plants using model training, Gradio UI, and Flask Web Application.

- Built a VGG19 model, compiled it using an optimizer, loss function, and metrics, and trained it using the fit generator function.
- Used Early Stopping and Model Checkpoint to improve the model's performance.
- Created a Gradio UI to provide a user-friendly interface for the model, mapped predictions to actual class names using a dictionary, and used the pretrained model.
- Built a Flask Web Application to deploy the model, created an endpoint for the model to receive data, returned predictions in JSON format, and used libraries like Flask, numpy, and keras.
- **Technologies used:**
  Python, TensorFlow, Keras, Gradio, Flask, and JSON

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Experience

Software Engineer Intern **July. 2022 - Dec. 2022**
RHR Software Consultancy *Toronto, ON, Canada*

- Researching on a new method of **Random Number Generation** by tracking ionised gas molecules in a sealed container.
- Research includes outputting pure random numbers at an exponential rate using the concept of **Brownian Motion**.
- Created simulations of **elastic and inelastic collisions** between gas particles using software and programming techniques that accurately model the relevant physics and interactions.

Coding Profiles

- **LeetCode** 3 stars on LeetCode. Top 9% rated at **1753**.
- **GeeksForGeeks** University rank 86 on GFG.

Achievements

- Secured 2nd Runner Up in Cess-O-Hack (Oct. 2021) held at Guru Nanak Dev University.
- Top 40K in Hacktoberfest 2022
- Secured 3rd position in Code 'N Tech (Sept. 2022) by Newton School.

Co-Curricular

- Tech Head at Computer Engineering Student Society (CESS) for years 2022 -2024.
- Tech Head at All About Programming for years 2022-2023.