Sravya Abburi

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SUMMARY

IT professional with 4 years of experience, transitioning to machine learning with strong analytical skills and a passion for data-driven problem-solving. Currently pursuing a post-graduate degree in Al/ML from Purdue University.

PROJECTS

Machine Learning Project: Research Paper Summarization

September 2023 - October 2023

Project Description:

Developed a specialized model named "Research Paper Summarizer" using LLama2, a 7-billion parameter model, for the task of summarizing arXiv research papers. The primary objective of this project was to automate the process of generating concise and coherent summaries from lengthy academic papers.

Challenges:

Model Fine-Tuning: Fine-tuning a massive model like LLama2 on the arXiv dataset posed challenges related to computational resources. To overcome this, I employed Parameter-Efficient Fine Tuning (PEFT) and Quantized Low-Rank Adaptation (QLORA) techniques, which allowed me to achieve remarkable results while reducing computational demands.

Handling Long Documents: LLama2's token limit of 4096 presented a significant hurdle when dealing with lengthy academic papers. To address this limitation, I have implemented an intuitive two-step approach. I initially performed extractive summarization on lengthy documents to condense the content and then fed this condensed version into the abstractive summarization process.

Achievements:

Successful Fine-Tuning: successfully fine-tuned the LLama2 model using PEFT and QLORA techniques, enabling it to generate high-quality summaries for arXiv papers. This approach ensured that the model performed efficiently and effectively.

Generalization: Our fine-tuned model exhibited excellent generalization capabilities, effectively summarizing a wide range of research papers from arXiv across various domains.

Resource Efficiency: By employing PEFT and QLORA, we substantially reduced the computational resources required to operate a model as substantial as LLama2, making it more accessible for research purposes.

Streamlined Academic Research: Research Paper Summarizer simplifies the process of reviewing academic papers, offering concise and informative summaries. This can save valuable time and resources for researchers and academics, facilitating more efficient literature review and research.

EXPERIENCE

Associate Consultant at Tibco Software July 2017 - April 2021, Hyderabad

Worked as offshore TIBCO consultant on various projects with domains ranging from banking to market research
Actively involved in entire Development lifecycle of creating SOAP/REST Based Web Services from end to end and making sure
code adheres to industry standards

Troubleshooting & debugging Issues in UAT and Prod environments while meeting tough timelines Training Production Releases and artifacts with the client

Projects Worked:

ADCB (Abu Dabi commercial bank project)

Nielsen (D2O VUE module)

EDUCATION

PGP in AI/ML

Purdue University • 2023

Bachelor of Technology

CVR College of Engineering • Hyderabad • 2017 • 93%

SKILLS

Machine Learning: Python NumPy Pandas Matplotlib Seaborn TensorFlow ScikitLearn Keras SciPy Langchain

Other: Git HTML CSS Bootstrap JavaScript React SQL Jupyter MongoDB Java Tibco BW 5 Tibco Ems

CERTIFICATIONS

PGP in AI/ML

Purdue University • 2023

TIBCO Certified Professional for TCP-TIBCO ActiveMatrix BusinessWorks

TIBCO • 2019

AWARDS

Star Contributor Award for contribution to the project

TIBCO • NOV 2020

Awarded Gold medal for academic excellence and graduated with 93%

CVR • 2017