Anand Panda

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EDUCATION

Kalinga Institute Of Industrial Technology

Bachelor of Technology (B.Tech) in Computer Science and Engineering *October 2021 – May 2025*

Relevant Coursework : Data Structures and Algorithms, Object Oriented Programming, Database Management Systems, Computer Networks, Big Data, Cloud Computing

EXPERIENCE

Summer Intern June 2024 – July 2024

Bharat Heavy Electricals Limited (BHEL) *Noida, India*

- Spearheaded the development of a custom chatbot that processed and analyzed data from multiple PDFs simultaneously, improving data handling efficiency.
- Optimized query response functionality, boosting accuracy by 20 percent through improved NLP algorithms and backend optimization.
- Engineered the chatbot using Langchain and Gemini frameworks, improving natural language processing and increasing data processing speed by 15 percent.

PROJECTS

P.A.A.R.O [Github Repo]

Python Automation, Speech Recognition

- Developed an AI-powered virtual assistant capable of voice recognition and executing user commands, such as checking time, playing YouTube videos, and web searches.
- Integrated web scraping functionality to gather relevant online search results and open links directly based on voice input.
- Implemented features like mood detection, metadata extraction from images, and Instagram profile data downloading, enhancing user interaction and automation tasks.

AI Customer Support [Github Repo]

Next.js, React.js, Tailwind.css, Typescript, Open AI, Langchain, Pinecone, Firebase, AWS

- Developed AI-powered chatbot using Next.js, React.js, and OpenAI to handle various customer support scenarios with intelligent, context-aware responses.
- Integrated Retrieval-Augmented Generation (RAG) to enrich responses by indexing and retrieving external content via URLs.
- Utilized Langchain, Pinecone, Firebase, and AWS for building scalable, high-performance backend systems and improving response accuracy through effective data management.

BERT for Sentiment Analysis API Deployment [Github Repo]

Python, FastAPI, BERT, Pipenv, HTTPie, Shell Scripting, REST API

- BERT Model Deployment: Deployed a pre-trained BERT model as a REST API using FastAPI to classify sentiment (negative, neutral, positive) from text inputs.
- API Design and Integration: Designed the API to handle text requests, process them through the BERT model, and return sentiment predictions with confidence scores.
- Custom Dataset Application: Fine-tuned the model using a custom dataset from Google Play app reviews, improving sentiment classification accuracy for real-world application scenarios.

End-to-End Text Summarization System [Github Repo]

Python, Conda, Docker, AWS (EC2, ECR), GitHub Actions, YAML, Terraform, CI/CD Pipelines, FastAPI

- Developed a Text Summarization System: Built a custom text summarization pipeline involving updates to configuration, components and main application files using Python.
- Environment Setup and Management: Created a virtual environment using Conda and managed dependencies via a requirements file for seamless execution.
- AWS Deployment Automation: Automated deployment using AWS services; containerized the application with Docker, stored images in ECR, and hosted on EC2 instances.

TECHNICAL SKILLS

Programming Languages: Python, R, Java, C++
Data Science and Machine Learning : BERT, OpenAI, Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy
Natural Language Processing (NLP) and API's : FastAPI, Hugging Face Transformers, RESTful APIs
Database Management : MongoDB, SQL, SQLite
Others : AWS, Docker, Kubernetes, Github

ACHIEVEMENTS

- **Institute Rank - 3** on GeeksforGeeks from over 2000+ actively participating students.