Yashwanth Tadakamalla

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About me

A creative proactive, and pragmatic Data Science enthusiast who is familiar with the processes for gathering, cleaning, and organizing data to support the company's transformation into a data-driven business model. Advanced understanding of statistical and machine learning techniques, and experience in identifying opportunities and strategizing methods for improvement.

Work Experience

Ernst & Young   Nov 2021 – July 2023
Technology Consultant Intern   *Düsseldorf, Germany*
- Spearheaded exploratory data analysis, contributing to the training, testing, and implementation of a BERT model for automatic job requirements and resume matching.
- Conducted meticulous data labeling and cleaning, elevating data quality and significantly enhancing the accuracy of subsequent analyses and models.
- Independently designed and deployed a Chatbot using Power Virtual Agent.
- Showcased expertise in AI through various demonstrations, such as creating an automatic code-commenting system and an interview bot utilizing the OpenAI API.
- Ensured comprehensive project documentation, documenting all software development processes and results for future reference and knowledge sharing.

SayCheese   Jan 2019 – June 2019
Data Analyst   *Hyderabad, India*
- Employed descriptive and diagnostic analysis to identify patterns and predict likely outcomes.
- Prepared and delivered reports to management using PowerBI, providing valuable insights from data analysis.

Projects

Master Thesis: Reconfigurable FPGA Layout Generation | *Python, Optimization algorithms*   **May 2023**
- Developed and implemented novel Simulated Annealing and Evolutionary Strategy algorithms to efficiently solve the layout generation problem based on micro-slots.
- Conducted an extensive comparative analysis of the performance and effectiveness of SA and ES algorithms in generating optimal layouts
- Addressed challenges of layout generation with innovative layout generation solutions.
- Evaluated algorithm performance against existing Heuristic and Optimal solutions based on FPGA utilization and runtime.

Semantic Matching with German BERT for CV AFO Matching | *Python, NLP, EDA*   **June 2022**
- Led CV matching application development, utilizing semantic matching with a German BERT model for effective job requirement matching.
- Conducted insightful exploratory data analysis (EDA) to understand data and its nature.
- Ensured precise data cleaning and loading, rigorous model training, and testing for enhanced performance.

CV- Named Entity Recognition (NER) | *Python, NLP, Data Labelling*   **January 2022**

- Significantly contributed to an advanced system using Spacy and NLTK for accurate Named Entity Recognition (NER) in resumes, facilitating efficient skills and role categorization.
- Led comprehensive data cleaning and precise text labeling, ensuring high-quality input for the system.
- Collaborated within an agile team, ensuring timely project execution and success.

Comment Your Code: | *Python, Prompt Engineering, API*   **June 2023**
- Developed an AI-powered chatbot leveraging prompt engineering and the GPT API. Users upload Python (.py) files containing functions, and the chatbot automatically generates descriptive comments for each function.
- Utilized prompt engineering to prompt the GPT API to create explanatory comments above functions within the uploaded .py files. This automation significantly enhances code documentation and readability.
- The chatbot's automated comment generation contributes to code quality by ensuring clear and consistent documentation of function purpose and usage, fostering better code maintenance and team collaboration.

Interview Bot: AI-driven Interview Process | *Python, Prompt Engineering, Streamlight, API*   **June 2023**
- Applied advanced prompt engineering techniques to optimize Interview Bot for contextually relevant interview questions.
- Seamlessly integrated the GPT API as the project's natural language generation engine, enabling dynamic and personalized question generation based on job descriptions
- Employed the GPT API to assess user responses against job descriptions, facilitating real-time feedback and suitability valuations.

Interactive Sales Dashboard | *Python, SAC*   **May 2020**
- Identified key performance indicators (KPIs) relevant to sales, such as revenue, sales growth, customer acquisition, and product performance.
- Designed an intuitive and visually appealing dashboard layout, ensuring easy navigation and data interpretation.
- Implemented interactive filters and slicers to allow users to customize the dashboard view based on specific criteria.

BATMAN:Web App for Autonomous Car Threat Analysis | *Python, Spacy, BERT, EDA*   **May 2020**
- Developed a web app using language models (spaCy, BERT, XLNet) for autonomous car developers to analyze threats, consequences, and solutions.
- Gathered, cleaned, and organized data, with a focus on XLNet implementation and utilization.

Education

Paderborn University   **2019 − 2023**
Informatic Master   *Paderborn,NRW,Germany*
- Interactive Data Visualization
- Model-Based Systems Engineering
- High-Performance Computing
- Machine Learning
- Software Quality Assurance
- Design and Code analysis
- Advanced Computer Architecture

Technical Skills

Programming Languages: Python, R, SQL, Scala
Tools: Power BI, Power Query, CI/CD, PowerApps, MS Office, MS Excel, Git, Azure, Streamlit, Docker, Agile Project Management, Jupyter Notebooks
Machine Learning: Time Series Analysis, Computational Argumentation, NLP language models (BERT, spaCy), Large Language Models (LLM), Pandas, Numpy, Pytorch, Tensorflow, Scikit - learn, Keras, Apache Spark
Data Analysis and Visualization: Data Mining, Data Modeling, Data Pre-processing, Image Classification, Exploratory Data Analysis (EDA), Tableau, Dashboard Creation, Matplotlib, Seaborn
Web Development: HTML, CSS, Flask

Languages

- German – Intermediate

- English – Fluent