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SUMMARY

Over 12+ years of experience in the IT industry including 1.5 year in Data Science/Machine Learning projects, in a product-based company encompassing all phases of the software development life cycle (SDLC). My responsibilities include research, solution design, features implementation, customer escalations, and mentoring team members, with hands-on development experience. I excel in Machine Learning and NLP projects, employing frameworks like Scikit-Learn, TensorFlow, PyTorch

- Developed a range of models utilizing Classical Machine Learning, Deep Learning, and Generative AI techniques, including GANs, RNNs, and CNNs. Applied expertise in Natural Language Processing (NLP) using frameworks such as Scikit-Learn, TensorFlow, Keras, PyTorch, NLTK, and Hugging Face.
- Created insightful data visualizations with Python to support data analysis and presentation.
- Demonstrated proficiency in data cleaning, processing, and Exploratory Data Analysis (EDA).
- Built and fine-tuned predictive models to enhance performance and developed forecasting models for both structured and unstructured data, as well as Time Series data.
- Demonstrated experience in collaborating effectively with geographically dispersed teams, fostering seamless **communication** and **coordination**.
- Served as a **Scrum Master**, playing a pivotal role in facilitating and optimizing the Agile development process.

TECHNICAL SKILLS:

- | | |
|------------------------------|-----------------------------------------------------|
| • Operating Systems | : Windows - XP, 8, 10, 11, Linux |
| • Programming Languages | : Python, C, C++, C#, typescript |
| • Databases | : MySQL, PostgreSQL, Oracle, Microsoft SQL. |
| • IDE | : Microsoft Visual Studio, Web Storm, VS Code |
| • Version Management | : Git, TFS, Source Offsite, Vault |
| • Web development technology | : NodeJS, REST API, XML/JSON, Redis, MongoDB, Flask |
| • Machine Learning Libraries | : TensorFlow, Scikit-learn, PyTorch |
| • Deep Learning Frameworks | : Keras, TensorFlow |

- Data Analysis and Visualization : Pandas, NumPy, Matplotlib, Seaborn
- Natural Language Processing (NLP): NLTK
- LLM Framework : Langchain
- Cloud Platforms : AWS, Azure

PROFESSIONAL EXPERIENCE:

- **Post Graduate Program in Artificial Intelligence and Machine Learning - Texas McCombs School of Business**

March 2024 - Present

Austin, Texas, United States - Remote

- Full immersion postgraduate program in Artificial Intelligence and Machine Learning for Business Applications, McCombs School of Business UT Austin.
- Building Industry applications in Machine Learning, including NLP recommendation systems, utilizing Generative AI (ChatGPT), Deep Learning, Natural Language processing, Computer Vision, Data Analytics
- Predictive Analysis and Optimization Advanced Machine Learning.
- Build, Fit, Cross Validation (CV), Predict models.

- **AI/ML, Data Science, Generative AI Projects:**

Cardiac arrest prediction

Certain medical parameters help in predicting if a person is at risk of getting a cardiac arrest. Based on clinical data, predict if the patient is at risk of cardiac arrest

Skills & Tools: Tried various models along with Model tuning and improved model performance having Recall 84%. Logical Regression, Random Forest, Adaboost, Model tuning using RandomizedSearchCV, Under/Over sampling techniques, Business Recommendations

Chicken Disease classifier

CNN classifier is used for detecting images of chicken fecal samples into healthy and disease categories.

Skills & Tools: TensorFlow model, Flask, Docker, CI/CD pipelines created to deploy in AWS

Personal Loan Campaign

To identify bank customers with a high likelihood of purchasing a loan, you need to analyze the provided data to understand key customer attributes influencing loan acquisition. With this analysis, build a predictive model that captures patterns and customer characteristics, which will help the bank effectively target potential loan buyers, improving marketing efforts and increasing conversion rates.

Skills & Tools: EDA, Data pre-processing, Decision Tree, Model Performance Evaluation using techniques like pre-pruning, post-pruning and hyper parameter tuning and Improvement, Business Recommendations

Restaurant Turnover Prediction

Predict the Annual Turnover of a restaurant based on the variables provided in the data set. The data is about various restaurants from various cities of the country.

Skills & Tools: Univariate and Bivariate analysis, Linear Regression model, Random Forest, XgBoost model, their performance comparison using RMSE, feature selection using Lasso Regression.

FoodHub

Perform an exploratory data analysis and provide actionable insights for a food aggregator company to get a fair idea about the demand of different restaurants and cuisines, which will help them enhance their customer experience and improve the business.

Skills & Tools: Univariate analysis and Bivariate analysis, Exploratory Data Analysis, Business Recommendations

LLM Projects:

Implemented end to end LLM Project using LangChain

- Q&A from News URLs using LangChain, OpenAI, FAISS for Ed-tech
- Q&A from MySQL Database using LangChain, GoogleGenerativeAI, ChromaDB in Retail industry
- Q&A from paper loaded in csv using Langchain, FAISS, CSVLoader
- [PlayingCardImageDetectionUsingPytorch](#) used **PyTorch**
- Restaurant Name Generator and generating menu items based on cuisine using LangChain, OpenAI, LLM.

- **Magic Software Enterprises (India) Pvt. Ltd. (MSE)**
Team Lead, Senior Team Lead, Technical Consultant
June 2011 – Oct 2023 (12 Years)

Project Title: Intelligent Customer Support Chatbot (1.5 years) (June'22-Oct'23)

Responsibilities:

In this NLP project, an LLM (Large Language Model) is developed using prompt engineering to tailor the model's responses to specific customer's queries. Data embedding techniques are employed to convert textual data into numerical formats that the model can process efficiently. Guardrails are implemented to ensure the model generates appropriate, safe, and relevant content, mitigating risks of producing biased or harmful outputs. The project is

designed to integrate seamlessly within a product, leveraging the LLM for advanced natural language understanding and generation capabilities.

- Successfully reduced customer service response time by 30%. Improved customer satisfaction scores by 20%. Achieved high accuracy (over 85%) in intent recognition and response generation.

Skills & Tools: Python, LangChain, OpenAI API, AWS EC2, S3, Docker, FAISS for storing Data Embeddings, used techniques like Prompt Engineering, Data Embedding Techniques, Guardrails

Project: Notification Center and various features in Magic Workspace product. (6 months)

Responsibilities:

- **Designed** Notification center in this product. Workspace receives notifications from various applications and stores it temporarily in Redis cache and then reads these notifications from the queue and store it into MySQL DB and web-push these notifications to corresponding users. Also **handled defining data tables in MySQL and contributed server-side development.** (Skills: Node.js, Sequelize to store data in MySQL db, Redis cache.
- Supported **configurable BLOB Storage: local, S3 (AWS), Azure, Logging mechanism.**

Project: Major contributor in Dump Analysis and performance analysis (3+ years)

Responsibilities:

- Handled escalated customer issues and troubleshooting in XPA product. My job involved: **Analyze Crash dumps** using various debugging tools like **WinDbg, Visual Studio, Debug Diag, Analyze and fix performance and memory leaks issues.** Troubleshooting various wrong behavior problems using Microsoft debugging tools and 3rd party utilities.

Project : 64-bit project - supporting XPA product as 64-bit application (6.5 months)

Responsibilities:

- The project was to support this as a 64-bit application in deployment mode. It uses multiple 3rd party libraries with multiple technologies (C++, Win32, Java, C#, .NET, WCF, etc.), Given the substantial scale of the product, and multiple dependencies of 3rd party libraries, this was a highly challenging task considering the time constraints. But I managed to complete this challenge in 6-7 months.
- My role involved providing **technical guidance, monitoring progress, and contributing to the development of this project.**

Project: Web client development: (3.5+ years)

Responsibilities:

- Contributed to overall development and mentoring of Web client in Node.js, which includes migration of entire code from C# i.e., Rich Client (remote client - server support) to typescript (for Web client). Supporting numerous features for Web client in typescript for which UI is Angular like MLS, logging, state-less, custom validations,

supporting various types of formatting using various npm packages for alpha/numbers/date-time and its integration with XPA.

Project: Database Gateways development of RAD tool XPA, eDeveloper and XPA runtime features handling. (6 years)

Responsibilities:

- **As a Team leader, led a C and C++ Development team of 5 members for 5 years overseeing diverse database Gateways to Btrieve, PervasiveSQL, Memory, Informix, DB2, ODBC, MSSQL Server, and Oracle, while actively contributing to the optimization of the eDeveloper product's runtime engine.**
- Responsible for the mentoring, Design, Development, Enhancement, Defect fixing into the Database Gateways.

EDUCATION:

- **Institute: Walchand Institute of Technology, Solapur, India.**
Course: Bachelor of Engineering in Electronics.
- **Institute: Center for Development of Advanced Computing (C-DAC), ACTS, Nagpur, India.**
Course: Post Graduate Diploma in Advance Computing.