Adarsh Kumar

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EDUCATION

Texas A&M University — College Station, TX
MS in Data Science — *Aug 2024 - Current*

KIIT Deemed to be University — Bhubaneswar, India
B. Tech. in Computer Science and Engineering (GPA: 3.7) — *Jun 2018 - May 2022*

WORK EXPERIENCE

Optum, UnitedHealth Group — Gurgaon, India
Software Engineer (Data Science) — *May 2023 – July 2024*

- Developed and implemented a machine learning algorithm to predict member enrollment in MassHealth programs, achieving 80% accuracy and increasing program efficiency by 15%
- Collaborated with cross-functional teams to integrate NLP technology into the existing systems, reducing manual effort by 95% and improving overall system efficiency by 30%
- Redesigned the existing CAP Portal(internal portal), and Provider Portal and designed a new Doulas Portal for MassHealth focusing on user-centric design principles, resulting in a substantial increase in user involvement by 45%
- Tech Stack Used: *Microsoft SQL Server, Python, Excel, Tableau, Machine Learning, NLP, UI/UX*

TDP Software Engineer — *Jun 2022 – Apr 2023*

- Utilized Microsoft SSIS and Microsoft SQL Server to design scalable architecture for ETL processes, handling over 1TB of data daily with near-real-time processing capabilities.
- Implemented complex job flows to read and write from flat files and databases, resulting in a 20% increase in data accuracy, saving $8,000 annually through automation.
- Tech Stack Used: Microsoft SSIS, Microsoft SQL Server, Microsoft SSRS

HighRadius Technologies — Bhubaneswar, India
Machine Learning Engineer Intern [Certificate] — *June 2021 - May 2022*

- Enhanced the scalability and accuracy of forecasting models by 10% through advanced Python programming, enabling more accurate long-term predictions for business planning
- Customized and optimized machine learning algorithms to reduce tuning time by 11% at the day level and 62% at the week level, resulting in more efficient data analysis processes
- Built an ML Full Stack Web Application using ReactJS, resulting in a 20% reduction in manual data entry time.
- Tech Stack Used: *Python, SkLearn, Matplotlib, Seaborn, SciPy, Statistical Modelling, MySQL*

PERSONAL PROJECTS

MediBot - Optum (currently in the POC state)
Tech Stack Used: *LLM, HuggingFace, OpenAI (GPT-3.5), Streamlit*

- Designing and implementing an innovative chatbot system using Language Model (LLM) technology to replace the conventional FAQs system in the MassHealth provider portal
- Developing a unique feature enables the chatbot to analyze paid claims for MassHealth

Invoice Management Application [GitHub][Presentation]
Tech Stack Used: *Python, Java 8, JDBC, Servlets, JavaScript, React.JS, MySQL*

- Developed a full-stack web application that accurately predicts invoice clearance dates with a margin of error of only 5%
- The web application is exposed to different user roles such as analyst, and manager

SpaceX Falcon9 First Stage Landing Prediction [GitHub] [Presentation]
Tech Stack Used: *Python, Beautiful Soup, SkLearn, Dash, Plotly, MySQL, Presentation*

- Utilized advanced machine learning algorithms to develop a SpaceX Falcon9 landing prediction model with an accuracy rate of 95% that will successfully land to save ~ $100 million
- Scrapped data from SpaceX API, and SpaceX Wikipedia page, and created a dashboard for visualization

SKILLS

- Languages: Java 8, Python 3, MySQL,
- Developer Tools: Jupyter Notebook, Jenkins, Git, Postman, Jira, Google Colab, Power BI, Excel.
- Technologies / Libraries: SkLearn, Matplotlib, Plotly, Beautiful Soup, Tensorflow, NLTK, HuggingFace, LangChain, SSIS/SSRS, Generative AI
- Coursework: Data Structures, ML, Database Management Systems, AI, Cloud Computing, Data Analysis, Statistics.

CERTIFICATIONS

- IBM Data Science Specialization (Certificate)
- deeplearning.AI - Neural Networks and Deep Learning Certification (Certificate)
- Google Cloud Platform - Machine Learning & AI Skills (Profile)