

AMAN KUMAR

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Education

Vellore Institute Of Technology, Vellore

Sep. 2020 – July 2025

Mtech Integrated Data Science

8.0 cgpa

Army Public School

2020

CBSE XII

93.8%

Experience

Western Digital (Sandisk India)

September 2024 – June Present

AI - ML Intern

In Office

- Researching and implementing Optimization techniques for streamlining ASIC development processes.
- Analyse data and identify patterns to develop new methods for bottle neck detection.
- Developed an optimization model for STA correlation using Differential Evolution resulting in 55percent improvement.
- Working on Inhouse Multicorner analysis optimization for slack prediction.

Valsco Tech

Dec 2023

Machine Learning Intern

Remote

- Machine Learning Intern at Jurident
- Participated in design discussions and code reviews for the project
- Used multiple hugging face NLP models to contribute to generative AI application.

Projects

TALK to DB(Database) APP | Streamlit,LLMs,langchain, SQL, Google Palm

- Create a conversational interface with the Database (DB) App using technologies such as Streamlit, Large Language Models (LLMs),langchain, SQL, and Google Palm, implemented best practices for code optimization and model implementation Conducted unit testing and integration testing to ensure the application's reliability.

MARKET ANALYSIS WIZARD | Python, ReportLab, Matplotlib, Gemini API, SerpAPI, dotenv

- Created an autonomous market research tool that uses Gemini AI and SerpAPI to produce comprehensive, premium reports with dynamic visualizations and refined SWOT tables, clearly segmenting market insights, target audience, resource needs, and optimal locations.

REACT COLORS | React, Material-UI, React Router, react-sortable-hoc, Emoji-Mart

- Developed a color palette application using React for dynamic UI components, React Router for seamless navigation, and Material-UI for pre-styled, responsive components. Utilized react-sortable-hoc for intuitive drag-and-drop color arrangement and emoji-mart for emoji selection in palette naming. Managed form validation with react-material-ui-form-validator, ensuring unique palette names. The application leverages Webpack and Babel for efficient module bundling and cross-browser compatibility.

CHATBOT | Html,Css,Bootstrap,JavaScript,OpenAI Api

- Developed a chatbot using HTML, CSS, and JavaScript, leveraging the OpenAI API for NLP. JavaScript handles real-time message processing, user input, and API integration for generating responses. The responsive design, styled with CSS, ensures compatibility across devices,

Technical Skills

Languages: Python, SQL, Java

Web Technologies: HTML, CSS, JavaScript, Flask, React.js, Fast API

Tools: Power BI, MS Excel, Git, Figma, Jupyter Notebook, Anaconda, PostgreSQL

Generative AI: RAG, NLTK, Hugging Face models,NLP, Transformers, VectorDB(chromaDB), Langchain, Pinecone

Data Analysis: Pandas, NumPy, Matplotlib, Hypothesis Testing, A/B Testing, Data Wrangling, EDA

Machine Learning: Supervised Learning (Regression, Classification), Unsupervised Learning(Clustering), Deep Learning, TensorFlow, Keras, scikit-learn, PyTorch

Soft Skills: Problem-Solving, Communication, Analytical Thinking, Troubleshooting, Attention to Detail

Certifications: Artificial Intelligence Analyst - IBM, Data Science- British Airways, Introduction to Generative AI -(google) , Statistics - LinkedIn (Basics),(Probability),(Using datasets)

Extracurricular

Fitness n Beyond

Feb 2023– Jan 2024

Core committee member

VIT Vellore

- Participated and helped organising Physical fitness events to spread awareness for fitness and also won 2nd prize in under 83kgs Power Lifting