

Atharva Dumbre

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Skills

Languages & Databases: Python, SQL, JavaScript, Java, C, HTML, CSS, MySQL, MongoDB, FAISS

Tools & Frameworks: Excel, Power BI, Tableau, Git, VS Code, Jupyter Notebook, React, Express.js, Node.js, Flask, OpenAI, Scikit-learn, TensorFlow, Keras, Pytorch, LangChain, Hugging Face, Pandas, NumPy, Matplotlib, Seaborn, XGBoost, NLTK, FastAPI, Streamlit, CUDA

Cloud Technologies: AWS, Docker, Apache Airflow, AWS Services (S3, Glue, Lambda, Athena)

Management Skills: Communication, Teamwork, Problem-solving, Analytical reasoning, Attention to Detail, Time management, Detail-oriented

Other: Machine Learning, Deep Learning, Data visualization, Data Science, Regression, Classification, Clustering, NLP (Natural Language Processing), LLM (Large Language Models), RAG (Retrieval Augmented Generation), Data Analytics, Time-series analysis

Work Experience

NJIT - Ying Wu College of Computing

Newark, NJ

Research Assistant – Data Scientist

Jan 2024 - May 2024

- Developed algorithms using reinforcement learning with Python & the PyTorch framework for a traffic control system that led to a 9% reduction in the average waiting time of vehicles at 5 simulated traffic intersections.
- Collaborated closely with PhD students, reviewing and summarizing over 50 research papers, and provided feedback that helped refine their work, leading to a noticeable improvement in the quality of their research and increasing publication acceptance rates by 20%.
- Achieved 99% accuracy in annotating over 300 images of simulated traffic intersections on Roboflow, in collaboration with other researchers, improving the dataset quality for reinforcement learning models.
- Worked with my supervisor to significantly boost our data processing capabilities by 67%, carefully setting up and fine-tuning simulation tools like SUMO and CARLA on 10 systems to ensure everything ran smoothly for our data-driven projects.

NJIT - Ying Wu College of Computing

Newark, NJ

Graduate Teaching Assistant (CS656: Internet and Higher Layer Protocols)

Sep 2023 - May 2024

AICTE - EduSkills Foundation

Remote

AI-ML AWS Intern

Oct 2021 - Dec 2021

- Administered 75% of common student queries autonomously using an NLP chatbot implemented with AWS Lex and AWS Lambda, integrating the chatbot into WhatsApp using the Twilio programmable messaging API.
- Slashed student inquiry response time by 80% via integration with university support services, measured by average response time metrics.
- Grew student satisfaction with support services by 30% as measured by post-interaction survey scores, by improving chatbot interface.

Cisco Networking Academy

Remote

Cyber Security Intern

Jan 2021 - Jun 2021

Projects

AI Logo Generation Platform (creative-dalle.com) – MERN (Mongo, Express.js, React, Node.js) | OpenAI | Hostinger | Cloudinary

- Launched a custom logo generation platform utilizing OpenAI's DALL-E 3 model to generate logos with prompts, featuring "Surprise Me," social sharing, & keyword search; ensured 99.9% uptime with Render.com & Hostinger.com cloud hosting & served logos with Cloudinary. [Link](#)

PDF Chat with RAG System – Python | Streamlit | LangChain | HuggingFace | FAISS

- Developed a chatbot using Streamlit to convert PDFs into a searchable knowledge base with the FAISS vector database, LangChain, & Google's T5 LLM with average query retrieval in 4 seconds. [Link](#)

YouTube Trending Videos Data Engineering & Analysis – AWS | Power BI | SQL | DAX

- Implemented an ETL pipeline using AWS (S3, Glue, Lambda, Athena, CloudWatch) to process & analyze over 70,000 YouTube Trending Videos records for 3 countries (USA, Canada, Great Britain), converting JSON to Parquet & created a Power BI dashboard with 5 KPIs & trends. [Link](#)

Fintech - Revenue Analysis: Hospitality Domain – Power BI | SQL | DAX

- Designed an intuitive Power BI dashboard for the Codebasics Resume Challenge, using DAX & SQL queries to preprocess hospitality data & create 26 key performance indicators (KPIs). [Link](#)

Finance Tracking App – Python | React | FastAPI | SQLAlchemy

- Designed a full stack web application to track daily finances, leveraging a FastAPI backend for efficient data management and secure user authentication and SQLite database, facilitated by SQLAlchemy & Pydantic. [Link](#)

Education

New Jersey Institute of Technology | **M.S. in Computer Science** | GPA: 3.78 / 4.00

Sep2022 - May 2024

University of Mumbai | **B.E. in Computer Engineering** | GPA: 7.88 / 10.00

Aug 2018 - May 2022

Research Publication, Certificates & Achievements

- Oracle Generative AI Professional | AWS Cloud Practitioner | TensorFlow Developer Certificate | LLaMa for Developers (LinkedIn) | Neural Networks & Deep Learning (Coursera) | HTML, CSS, & Javascript for Web Developers (Coursera) | Fundamentals of Deep Learning for Computer Vision (NVIDIA) | Introduction to AI in the Data Center (NVIDIA) | Foundations of Machine Learning & Applications Bootcamp (IIT Mandi)
 - Secured 1st place for "Most Creative Use of Redis Cloud" at HackNJIT Oct 2023 | Kaggle Expert (3647 Highest Rank).
 - Classification Of Indian Sign Language Characters Utilizing Convolutional Neural Networks & Transfer Learning Models With Different Image Processing Techniques (IEEE) | [Link](#)
- Electronic ISBN:978-1-6654-7988-2