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Yash Pame

Data Scientist

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As an AI and Data Science Engineer, I specialize in AI, LLMs, Generative AI, Deep Learning, and Programming. My expertise spans NLP to computer vision, with a track record of impactful projects. A quick learner and critical thinker, I excel both independently and in teams. Proficient in LLMs, ViTs, and Neural Networks, I focus on preprocessing and model optimization for high accuracy. Driven by innovation, I aim to make a real-world impact as a Data Scientist and Machine Learning Developer. My skills are proven through internships, projects, and research detailed below.

Education

BE Artificial Intelligence and Data Science, *D Y Patil College of Engineering Pune* 2020 — 2024
Aggregate CGPA: 9.58

HSC 12th, *AUB High School and Jr College* 2020
Percentage: 74%

CBSE 10th, *Vishwshanti Gurukul School* 2018
Percentage: 85.8%

Skills

Languages & Databases	**Python**, C++, **SQL, MongoDB**
ML/DL Frameworks	**TensorFlow, Keras, Scikit-Learn, NLTK**, PyTorch
Backend Frameworks	**Flask, FastApi**
Tools	**MySQL, HuggingFace, Git, GitHub**, MS Excel, PowerBI
Soft Skills	**Leadership, Critical Thinking, Problem Solving, Project Management**, Communication
AI/ML Skills	**Artificial Intelligence (AI), Generative AI, Large Language Models (LLMs), Neural Networks, Natural Language Processing (NLP), Computer Vision, Vision Transformers (ViTs), Machine Learning, Deep Learning**

Technical Experience

Graduate Trainee Engineer - GenAI **Sep 2024 — Present**
NTT Data *Pune*

- Currently undergoing training at NTT Data with a focus on Generative AI, Azure, and emerging technologies.
- Developing expertise in cloud computing and AI-driven solutions through hands-on projects and advanced training.

Data Scientist, Internship + Full Time **Mar 2024 — Sep 2024**
Pivotchain Solution Technologies Pvt Ltd *Pune*

- Contributed to projects within the computer vision domain, focusing on the development of AI-driven software aimed at enhancing security measures.
- Worked on the Raven-AI Shield and Raven-AI Spirit projects, focusing on video surveillance and automated security features.
- Utilized synthetic data generation techniques with Stable Diffusion and RealVIZ XL and employed multi-modal transformers, CLIP, LLava, and LLAMA frameworks to develop a video search model capable of detecting events and individuals in long CCTV footage.
- Assisted in backend API development, including the integration of a payment gateway onto the company website.

Data Analytics, Internship **June 2023 — July 2023**
***Government of India**, National Informatics Center* *Delhi*

- Contributed to the TejasVI tool, a visualization platform for the Government of India.
- Developed a robust and accurate generic forecasting model adaptable to any dataset, outperforming ARIMA and Prophet in 70% of tested datasets.
- Created a rule-based natural language to SQL converter, allowing users to query data using natural language inputs.

Algorithm Developer & Data Analyst, Internship **Oct 2022 — May 2023**
Benign Capitals *Remote*

Research and Publications

A Novel Approach To Maze Solving Algorithm **April 2023**
5th IEEE International Conference on Emerging Smart Computing and Informatics (ESCI-2023) *View Paper*

A Novel Approach to Improve User Experience of Mouse Control using CNN based Hand Gesture Recognition **January 2024**
7th IEEE International Conference on Computing, Communication, Control and Automation (ICCUBEA-2023) *View Paper*

Projects

Adaptive SignalSense
BE Final Year Project

- Developed an AI-based solution to dynamically optimize traffic signals based on real-time traffic density, addressing congestion and inefficiency in high-traffic areas.
- Utilized computer vision techniques to detect traffic density by analyzing vehicle interactions with a virtual green canvas superimposed on road areas from camera feeds, providing a cost-effective and practical solution for real-world deployment.
- Implemented a dynamic signal adjustment system that fine-tunes signal timings using graph optimization algorithms, creating a comprehensive city-wide signal and road graph to ensure synchronized and efficient traffic flow.
- Enhanced traffic management by alleviating congestion, improving traffic flow, and reducing energy consumption, with a focus on the unique challenges of Indian road networks, and potential applications for smarter urban transportation systems globally.

FutureVision
Government of India, National Informatics Center

- Developed a robust forecasting model seamlessly integrated with the Government of India's Tejas VI visualization tool, demonstrating expertise in merging predictive analytics with real-world applications.
- Designed a versatile model capable of effectively handling diverse datasets, ensuring accurate and timely forecasted outcomes through meticulous data analysis and model refinement.
- Employed efficient algorithms and optimization techniques to achieve swift and accurate forecasts, contributing to minimized processing time and enhancing the tool's overall performance.
- Outperformed Prophet, ARIMA, Exponential Smoothing, and LSTM in over 70% of cases

Lang2SQL
Government of India, National Informatics Center

- Developed and integrated Lang2SQL, a rule-based ML model for natural language to SQL conversion in TejasVI, the Government of India's visualization tool.
- Demonstrated proficiency in enabling intuitive querying of files and databases through Lang2SQL, showcasing expertise in handling SQL clauses such as SELECT, FROM, WHERE, GROUP BY, HAVING, ORDER BY, and LIMIT.
- Lang2SQL's exceptional performance surpasses multiple open-source models, including Table QA and various small sized pretrained models on platforms like Hugging Face.

Achievements

Best Outgoing Student, *AI&DS Department, DYPCOE* — Feb 2024
Recognized as the Best Outgoing Student in the department of AI&DS, DYPCOE, 2024 batch.

Top 5 Finalist, *DataSolve 2022* — Nov 2022
Secured the position in Top 5 Finalist in DataSolve 2022 Competition Organized by Wolters Kluwer.

4th Rank, *Pune University* — 2021–2022
Secured 4th rank in Pune University AI&DS Department in second year with aggregate CGPA of 9.48

6th Rank, *Technoxian World Robotics Championship* — Aug 2022
Team DRAIC Secured 6th position in category of Robo Race among 180 teams from 7+ countries.

Runner Up, *SPPU Rollball Championship* — Mar 2022

Positions of Responsibility

President, *Artificial Intelligence Students Association, DYPCOE* — Dec 2021 — Nov 2023
AI-ML Specialist, *Google Developer Students Club, DYPCOE* — Aug 2022 — July 2023
AI-ML Lead, *Intel AI Students Club, DYPCOE* — Aug 2022 — July 2023
Programming Team Member, *D Y Patil Robotics and AI Club, DYPCOE* — Oct 2021 — May 2023

Courses and Specializations

Machine Learning Specialization — 3 Course Specialization| Duration: 3 Months | View Certificate
Google Data Analytics — 8 Course Specialization | Duration: 6 Months | View Certificate
Tensorflow Developer Professional Certificate — 4 Course Specialization | Duration: 4 Months | View Certificate
Deep Learning Specialization — 5 Course Specialization | Duration: 4 Months | View Certificate
Generative AI with Large Language Models — Duration: 1 Month | View Certificate