

Tejas Pawar

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Data scientist with a strong foundation in Python, ETL, Experimental Design and Machine Learning for analyzing business needs, executing process improvements and supporting decision-making, with a track record of successful project completion.

CERTIFICATIONS

- **Associate Data Scientist**, DataCamp Sep 2024

EDUCATION

Boston University, Boston, MA

Master of Science; Applied Data Analytics - Concentration Machine Learning; GPA 3.77 Sep 2023 – Dec 2024

- Coursework: Data Mining, Data Science, Data Warehousing, Advanced Machine Learning and Neural Networks

D Y Patil International University, Pune, India

B. Tech; Computer Science Engineering- Concentration Data Science; GPA 3.65 Aug 2019 - Jun 2023

- Coursework: Fundamentals of AI ML, Advance Data Science, Data Visualization, Big Data Analytics

SKILLS

Tools: Python, R, SQL, Excel, Jupyter, VS Code, Power BI, Tableau, Looker, Apache Spark, Airflow, Snowflake, Microsoft Azure, Google Cloud Platform, AWS, Streamlit, Docker, Databricks, Google Vertex AI, LangChain, LoRA, OpenAI API

Python Packages: Pandas, NumPy, TensorFlow, PyTorch, Keras, Scikit Learn, SciPy, OpenCV, SpaCy, Matplotlib, Plotly

Data Science: Analytics, Statistics, Data Wrangling and Processing, Data Visualization, Data Mining, Hypothesis testing

Machine Learning: Classification, Regression, Clustering, Decision Trees, Boosting, Deep Learning, Predictive Modelling

NLP: Text Pre-processing, BOW, N-Grams, TF-IDF, Word2Vec, Bert, LSTM, Sentiment Analysis, Text Classification

Computer Vision: Image Processing, Object Detection, Pattern Recognition, CNN, Variational Autoencoder

MLOps: Model Deployment, Model Serving, Monitoring and Logging, MLflow, Version Control, CI/CD, Data Pipelines

Research: Large Language Models, Generative AI, Recommendation Systems, Robotics and Automation

Soft Skills: Leadership, Project Management, Strategic Problem-Solving, Ability to Influence Decision-Making, Team Player

EXPERIENCE

Boston University, Boston, MA

Graduate Teaching and Research Assistant

Jan 2024 - Present

- **Teaching Assistant** for CS 699 Data Mining and DS 210 Programming for Data Science, responsible for grading, leading problem-solving sessions, and providing guidance on R, Python, Rust, and Java programming projects of students
- **Research Assistant**, developed and fine-tuned a NLP model using RoBERTa to classify student-submitted reports as AI-generated or human-written, enhancing integrity of academic submissions through advanced AI detection techniques

Gera Developments Pvt Ltd, Pune, India

Data Scientist

Jul 2022 - Sep 2023

- Faced manual effort in handling customer queries, so developed and deployed a real-time sentiment analysis model for emails using NLP and Hugging Face's BERT, achieving 85% accuracy and reducing CRM workload by 15%
- Identified fragmented customer data, so led the development of the 'Customer Happiness Meter', a centralized platform that unified customer data, improving customer engagement and marketing strategies by 35%
- Resolved complex data challenges by collaborating with cross-functional teams to implement machine learning models, MS SQL, and ETL pipelines, delivering insights and meeting product requirements ahead of schedule
- Devised interactive Power BI dashboards to communicate technical findings to non-technical stakeholders
- Conducted A/B tests in Python using experimental design to evaluate the conversion rates of marketing campaigns, leading to a selected marketing campaign generating an additional \$1.3 million beyond the projected revenue

Winjit Technologies (Information Tech), Nashik, India

Data Science & Research Intern

Oct 2021 - Feb 2022

- Addressed inconsistent data across datasets by preprocessing 100GB+ of data using Python, leading to a 15% improvement in model training time and a 10% increase in prediction accuracy
- Tackled inefficiencies in building ML models by optimizing AutoML and Explainable AI algorithms, reducing time complexity by 20% and automating 80% of manual processes enhancing overall system scalability
- Solved client issue tracking delays by creating an interactive Power BI dashboards for financial monitoring and performance analysis, reducing support response time and enabling 30+ clients to track key metrics in real-time

PROJECTS

Personal Assistant Conversational Q&A Chatbot,

Sep 2024 – Nov 2024

- Engineered and deployed a personal assistant chatbot utilizing OpenAI's GPT-3.5 Turbo model, showcasing proficiency in natural language processing, model integration, and deploying AI solutions to production environment
- Implemented end-to-end machine learning workflows—including data preprocessing, API development, and backend integration on Hugging Face Spaces—demonstrating expertise in building scalable machine learning applications

Text To Image Generation App,

Jan 2024 – Apr 2024

- Fine-tuned the Stable Diffusion XL model using a specialized science diagrams multimodal dataset, enhancing its efficiency for accurate image generation, deployed the model via Amazon SageMaker for robust scalability
- Developed an iOS app with Xcode integrating this advanced AI model for seamless text-to-image conversions

Identification of Bullying Victims Using Data Mining Techniques,

Sep 2023 – Dec 23

- Demonstrated expertise in R programming and data mining by effectively reducing a complex dataset of 204 attributes to 31 essential features using LASSO and ANOVA F-test, significantly improving the predictive accuracy
- Skillfully applied hyperparameter tuning and rigorous model evaluation across nine machine learning models favoring a logistic regression model for its balanced accuracy across classes, demonstrating my expertise in model evaluation

Digital Logistic System: The Next Generation Transport System - Robotics

Aug 2022 – Jan 2023

- Developed a line-following robot for the Digital Logistic System (DLS), using Arduino, ultrasonic and infrared sensors, and C++ programming, showcasing skills in robotics and embedded system design.
- Innovated the DLS project, integrating AI and machine learning with Python, MQTT for IoT communications, and ROS for simulations, to enhance logistics efficiency and reduce operational costs.

Barbie With Brains,

Jan 2022 – May 2022

- Engineered an interactive virtual assistant using an RNN (Recurrent Neural Network) model for speech recognition, seamlessly integrated into a toy to provide an educational and entertaining experience for children
- Incorporated features storytelling, counting, word spelling, and reminder settings powered by Mycroft's API

Image Processing for Diabetic Retinopathy Prediction,

Aug 2021 - Dec 2021

- Developed and validated a 52-layer deep MobileNetV2 convolutional neural network (CNN) model to process retinal images, achieving a detection and classification accuracy of 74.93% on the test dataset
- Implemented advanced image classification techniques to categorize retinopathy into five distinct stages: None, Mild, Moderate, Severe, and Proliferative Diabetic Retinopathy

PUBLICATIONS

Best Research Paper Award at 8th International Conference on Emerging Applications of Information Technology 2024

Title: “DNA Sequencing-induced Cancer Detection: A Representation Learning-inspired Sustainable Transformation in Internet of Healthcare,”

Publication: Springer Journal - Machine Learning for Social Transformation.

LEADERSHIP

Innovation Lab Leader,

Mar 2023 - Sep 2023

Gera Developments Pvt Ltd, Pune, India

- Led team of senior managers in integrating 4 advanced ML solutions across departments in timespan of 6 months
- Guided stakeholders' business decisions through strategic leadership, leveraging my expertise in data insights and data science skills to drive impactful outcomes

Data Science Community Lead,

Aug 2021 - Mar 2023

D Y Patil International University, Pune, India

- Mentored a community 200+ data science enthusiasts, bridging the gap between academia and real-world applications
- Empowered students to master complex data science concepts with exceptional clarity and simplicity

VOLUNTEER

Founder,

Jun 2020 - Present

Young Dumb Broke, Pune, India

- Coordinated food drives for hunger relief and led a partnership to plant/nurture 2,000+ trees amid COVID-19