

PRATHAMESH BAMB

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Date of Birth - 30.07.2002

Nationality - Indian



SUMMARY

Technology oriented Computer Engineering graduate with specialization in Artificial Intelligence and Machine Learning and professional experience in developing AI driven healthcare and enterprise solutions. I have worked on end to end system development including deep learning models, NLP based platforms, generative AI, and financial forecasting systems, gaining practical exposure to both technical execution and real-world business applications. Through academic research projects and industry roles, I have developed strong analytical thinking, structured problem solving, and the ability to translate complex technical concepts into actionable solutions. Alongside my technical foundation, I have demonstrated project coordination, stakeholder communication, requirement analysis, and cross functional collaboration, enabling me to align technology development with operational and strategic objectives. I am motivated to integrate engineering expertise with management principles to drive innovation, efficiency, and technology enabled decision making in dynamic organizational environments.

WORK EXPERIENCE

Medimaze Solutions Pvt. Ltd

May 2024 - Present

Data Scientist

- Contributed to the development of a pathology detection pipeline using DenseNet121 (PyTorch) for medical image classification, including DICOM pre-processing, model fine-tuning, training, validation, and performance evaluation using different metrics such as Accuracy, AUC (Area Under the ROC Curve), Precision, Recall, and F1-score.
- Built and integrated an automated spine MRI segmentation system leveraging nnUNet and TotalSpineSeg models, multi-stage deep learning inference, post-processing, vertebral label embedding (OpenCV), and conversion to DICOM-SEG formatted outputs for clinical workflows, exposed via FastAPI for seamless PACS integration.
- Designed and deployed a Tender Document Summarization platform using Streamlit and Cohere LLM API, implementing PDF/DOCX parsing, structured information extraction using regex, real-time streaming responses, word report generation, Google Sheets logging, and ERP integration via secure REST API communication for healthcare and enterprise clients.

INTERNSHIP

Vowtech Technologies Pvt. Ltd

August 2023 - January 2024

Machine Learning Intern

Pune, Maharashtra

- Developed a multi-agent AI-driven job screening platform using Python (FastAPI), React, and Hugging Face Transformers to automate job description summarization, CV parsing, candidate matching, shortlisting and interview scheduling. Implemented PDF upload, real-time preview, and per-skill match score analytics with persistent storage in SQLite.
- Engineered backend services to extract job requirements and resume text, compute semantic candidate job matching using transformer-based embeddings and cosine similarity scoring, incorporating text preprocessing (NLTK), skill keyword normalization, and ranking algorithms to generate automated shortlists

Dr. Dy Patil International University (In-House Internship)

May 2023 - July 2023

Research Intern

- Designed a Quantum Machine Learning model using QCNN layers to enhance feature extraction, normalization, augmentation and quantum circuit encoding, optimizing model training routines using gradient-based updates and performance evaluation metrics.
- Benchmarked QCNN against classical CNN architectures by comparing, computational cost, and model convergence, also visualized training outcomes using the MNIST dataset, highlighting advantages of quantum circuits in processing speed and accuracy for complex visual data.

ACADEMIC CIRRICULUM

DAX Forecasting - Major Project

- Developed a DAX stock trend forecasting system using Python, Pandas, Scikit-Learn, PyTorch (LSTM), SVM (linear, RBF, polynomial kernels), and XGBoost to model financial time series and predict future index movements, including thorough hyperparameter tuning, train-test splitting, scaling, cross-validation, and performance evaluation using metrics such as RMSE, MAE, and R2.
- Engineered robust data preprocessing pipelines to clean and normalize historical DAX index and financial time series, extract relevant features (rolling windows, technical indicators, lag features), implement sequence generation for deep learning, and compare model performance with visualizations (Matplotlib/Seaborn) for model selection and trend analysis.

Course Highlights

- Completed multiple full-stack and AI/ML projects such as Medically Tuned AI Powered Chatbot using RAG, Vox - Voice Assistant similar to Alexa & Siri, Expense Tracking System, & designed My personal portfolio.
- Awarded 6 star in Python on Hackerrank.
- Awarded 5 star in Problem Solving on Hackerrank.

EDUCATION

Dr. Dy Patil International University

August 2021 – June 2024

B.Tech in Computer Engineering, CGPA - 5.6/10

Trade: Artificial Intelligence and Machine Learning (AI & ML)

Pimpri Chinchwad Polytechnic

August 2018 – June 2021

Diploma Of Computer Engineering, Grade - 89.43%

Infant Jesus High School

April 2017 – March 2018

SSC, Grade - 79.20%

PROFESSIONAL SKILLS

- **Programming Languages:** Python, Javascript, SQL.
- **Machine Learning & Deep Learning:** Quantum Neural Networks, RAG, Generative AI.
- **Data Analytics & Visualization:** Pandas, Numpy, Matplotlib, Seaborn.
- **Frameworks & Tools:** Git, GitHub, Tensor Flow, Jupyter Notebook, AWS.
- **Databases:** MySQL, Redis, Vector Databases.
- **AI-Specific Skills:** NLP, Computer Vision, Data Pre-processing, Feature Engineering, Prompt Engineering.
- **Web Development:** HTML, CSS, Django, Flask, Angular (TypeScript).
- **Soft Skills:** Analytical Storytelling, Collaboration, Curiosity-Driven Exploration, Strategic Decisions.

EXTRA CIRRICULAR

Certifications

- Generative AI (Microsoft) - <https://bit.ly/4rqcqBZ>
- Fine-Tune LLM's (LinkedIn) - <https://bit.ly/4aWTMeU>
- AI Ethics (LinkedIn) - <https://bit.ly/4rrTX7Y>
- LLM Threats & Vulnerabilities (Pragmatic Labs) - <https://bit.ly/3MQv4ng>

Languages & Publications

- English - IELTS Overall 6.5 band (B2)
- German - Goethe-Institut (A2)
- Published research papers in reputable international journals.