



Abhishek Raghuwanshi

Gender – Male

Major in Technology and Development

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Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2024	8.09
PROFESSIONAL EXPERIENCE				
Ministry of Agriculture and Farmers Welfare <i>Research Associate (AI)</i>	<i>Research Associate (AI)</i> <span>[Feb'25 – Present]</span> <i>Development of LLM-based Chatbot for Ministry of Agriculture</i> <ul style="list-style-type: none"><li>Vectorized documents using <b>LangChain</b> and <b>HuggingFace Embeddings</b>, storing data in <b>Chroma DB</b></li><li>Integrated a <b>RAG</b> pipeline with <b>LLaMA-3.1</b> using Groq API for <b>conversational AI</b> with <b>memory retention</b></li><li>Designed an interactive web chat interface leveraging <b>Streamlit</b> for seamless query interactions</li><li>Containerized using <b>Docker</b> and deployed on Hugging Face Spaces, implementing <b>CI/CD pipelines</b></li></ul>			
	<i>Soybean Images Classification Model</i> <ul style="list-style-type: none"><li>Developed a classification model via <b>fine-tuning</b> EfficientNet-B0 for binary classification of <b>~10M+</b> images</li><li>Implemented comprehensive <b>EDA</b> on train/test data &amp; <b>evaluation metrics</b> to optimize model performance</li><li>Achieved an <b>F1-score</b> of <b>0.96</b> on val &amp; test sets, demonstrating high performance on low-quality images</li></ul>			
iNDX.Ai <i>Full Stack Developer</i>	<i>Full Stack Developer</i> <span>[Jul'24 – Dec'24]</span> <ul style="list-style-type: none"><li>Developed a <b>Leave Management Application</b> using <b>Node.js</b>, <b>Express</b>, and <b>PostgreSQL</b>, to improve employee leave request efficiency by automating approval workflows and integrating <b>Sequelize</b> for database interaction</li><li>Created a <b>Music Streaming Platform</b> from scratch, implementing features such as user playlists, song recommendations, and media streaming with <b>Svelte</b> for a dynamic frontend, supported by a <b>Node.js</b> and <b>PostgreSQL</b> backend, utilized <b>Git</b> and <b>Bitbucket</b> for collaboration with cross-functional teams</li></ul>			
	<i>Data Analysis and Visualization of HMIS and NFHS-5 Dataset for Manipur State</i> <span>[May'23 - Jun'23]</span> <ul style="list-style-type: none"><li>Created dataset of <b>50+ major health indicators</b> out of <b>250+ indicators</b> using <b>Exploratory Data Analysis</b></li><li><b>Analyzed</b> health data having 1.5lac records using <b>Python</b> and performed <b>ETL operations</b> using <b>PostgreSQL</b></li><li><b>Developed</b> an interactive <b>Dashboard</b> that gives relationship among different indicators using <b>Tableau</b></li></ul>			
WORLD BANK <i>Research Intern</i>				
KEY PROJECTS				
NATURAL LANGUAGE PROCESSING (NLP)	<i>Customer Sentiment &amp; Demand Forecasting for E-commerce</i> <span>[Apr'23 - Jun'23]</span> <ul style="list-style-type: none"><li>Compared performance of <b>LSTM &amp; Naive Bayes</b> classifier in classifying 99000+ tweets as positive &amp; negative</li><li>Achieved accuracy of <b>78.01%</b> with LSTM on applying <b>GloVe</b> word embedding &amp; <b>76.35%</b> with <b>Multinomial NB</b></li></ul>			
MACHINE LEARNING APPLICATION	<i>Effectiveness of various Machine Learning Algorithms in Predicting the Stock Prices of NIFTY</i> <span>[Jan'23 - May'23]</span> <ul style="list-style-type: none"><li>Utilized <b>Y Finance API</b> for model training/testing &amp; employed <b>data prep techniques &amp; feature selection</b></li><li>Evaluated performance of <b>LSTM, SVR, Ridge Regression, Random Forest</b> using <b>MAE, RMSE, NRMSE, R<sup>2</sup></b></li><li>Achieved the best <b>R<sup>2</sup></b> value of <b>0.84</b> through LSTM by using <b>hyper-parameter tuning and cross-validation</b></li></ul>			
LEADERSHIP & ORGANIZATIONAL EXPERIENCE				
ASSOCIATE PLACEMENT MANAGER	<i>Student Head   Institute Placement Team</i> <span>[Sep'22 – Dec'22]</span> <i>Leading a 3 tier-team of 300+ members entrusted with placements and internships of 4100+ students</i> <ul style="list-style-type: none"><li>Achieved <b>14%</b> higher selection on Internship Day 1 by redesigning the model &amp; reducing redundant interviews</li><li>Pioneered sector specific mock assessments; achieved <b>80%+ positive</b> feedback, <b>68% increase</b> in participation</li><li>Deployed a central resume verification portal to upgrade user experience &amp; security; saving <b>150+ man-hours</b></li><li><b>Negotiated</b> deal to introduce a structured analytics &amp; quant test preparation platform; aided <b>1500+</b> students</li></ul>			
Initiatives	<ul style="list-style-type: none"><li>Reduced duplicates in target firms by <b>43%</b>, to establish optimized contacting &amp; uniform load per coordinator</li><li>Introduced an advanced offer acceptance mechanism; automated shortlist tracking, to save <b>70+ man-hours</b></li></ul>			
Policy Making	<ul style="list-style-type: none"><li>Performed quantitative analysis of pre-existing job categorization model to redefine the compensation ranges</li><li>Reformed the <b>Student Placement Policy</b> to resolve disparity in Bonus &amp; 2<sup>nd</sup> job opportunities for IDC students</li></ul>			
EXTRA-CURRICULAR ACTIVITIES				
CERTIFICATES & ACHIEVEMENTS	<ul style="list-style-type: none"><li>Received <b>Certificate of Excellence</b> for APM tenure from Placement Office IIT Bombay</li><li>Secured <b>Gold Medal</b> in <b>Carrom</b> for Hostel-18 under Hostel General Championship 2022</li><li><b>Hobbies:</b> Playing Cricket &amp; Carrom, Watching Anime &amp; Movies, Listening Music, and Reading Books</li><li><b>Interest Areas:</b> NLP ML DL Agentic AI LLMs ChatGPT GenAI Transformers CV CNN Data Pipelines</li></ul>			
RELEVANT SKILLS	<b>Libraries/Frameworks:</b> PyTorch, TensorFlow, Scikit-learn, Matplotlib, NumPy, Pandas, Express.js, Node.js <b>Programming Languages:</b> Python, JavaScript <b>Tools:</b> PostgreSQL, MySQL, MS – Excel, Tableau, Power BI, QGIS, Microsoft Projects, Git, Bitbucket, GitHub <b>Soft Skills:</b> Teamwork, Reasoning, Communication, Leadership, Problem-Solving, Creativity, Management			