

# RUSHI KHELAGE

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## Summary

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Passionate about technology with strong foundation in machine learning, natural language processing, and generative AI. Experienced in building real-world projects using Python and Java, with focus on practical problem-solving. Known for strong data visualization and explaining skills, along with quick learning ability and keen interest in turning complex ideas into clear, impactful solutions.

## Education

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Bachelor of Engineering - Artificial Intelligence and Data Science — Dr. D. Y. Patil Institute of Technology, Pune — Expected 2026

Aggregate CGPA: 7.39 — 10th: 89.20% — 12th: 53.00% — MHT-CET: 92.51

## Skills

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Programming Languages: Java, Python	Frontend & Visualization: Streamlit, Power BI
Data Analytics: Pandas, NumPy, Matplotlib, Seaborn	Databases: MySQL
Machine Learning: Regression, Classification, Clustering, Model Evaluation	Artificial Intelligence: NLP, AI Optimization, ANN
Generative AI: Transformers (BERT), GANs, Diffusion Models	Tools & IDEs: Visual Studio Code, Eclipse
Data Science: Statistical Analysis, Feature Engineering, Data Mining	Advanced Analytics: Predictive Modeling, Time Series Analysis, A/B Testing
Big Data: Data Processing, ETL Pipelines, Distributed Computing	DevOps: GitHub
Cloud Platforms: AWS, Azure	
	Languages: English, Hindi, Marathi

## Projects

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### 1. Image Super-Resolution using GANs

- Developed image super-resolution model using SRGAN in PyTorch with adversarial training for high-quality outputs
- Trained custom Generator and Discriminator networks with optimized loss functions and advanced image processing
- Achieved superior perceptual quality metrics compared to traditional upsampling methods
- Implemented comprehensive data preprocessing and model evaluation techniques

### 2. AI-Generated Image Detector

- Developed end-to-end deep learning pipeline with PyTorch to distinguish real and AI-generated images
- Engineered three model architectures (CNN, Vision Transformer, Hybrid CNN-ViT) with comprehensive data augmentation
- Achieved high classification accuracy with transfer learning and fine-tuning strategies
- Showcased proficiency in modern deep learning architectures and model development lifecycle

### 3. Sarcasm Classifier using BERT

- Developed sarcasm detection system using pre-trained BERT with Flask-based UI for real-time prediction
- Implemented comprehensive text preprocessing, tokenization pipeline and domain-specific fine-tuning
- Achieved high accuracy in text classification and integrated seamless web interface
- Deployed production-ready model demonstrating end-to-end NLP development skills

## Certifications

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– Machine Learning with Python IBM (Coursera) — Issued: 2025 — [Verify](#) — Data Analytics Certification — Godrej — [Verify](#) — Generative AI — IBM (Coursera) — Issued: 2025 — [Verify](#) — Fundamentals of AI Agents Using RAG and LangChain — IBM (Coursera) — Issued: 2025 — [Verify](#) — Foundations: Data, Data, Data, Everywhere — Google (Coursera) — Issued: 2025 — [Verify](#)

## Extracurricular Activities

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- State-Level Cricket Player: Represented university at inter-state cricket tournaments
- Technical Head – Sanskriti Club: Lead the technical team for organizing the annual fest at my college
- Computer Assembly: Assembled my own computer at the age of 15, demonstrating strong technical skills
- Calisthenics Athlete: Actively practice and participate in calisthenics for fitness and strength