MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

RUDRA SINGH
BTech Computer Engineering 2026
Date of Birth: 29/09/2004

Education

MPSTME, NMIMS University **2022 - 2026**
B. Tech in Computer Engineering
CGPA: 3.81/4
Alpha Junior College of Science and Commerce **2022**
HSC: 80
Bombay Cambridge International School **2020**
IGCSE: 87.5

Projects

LenDen Voicebot – 2025

- Built a multilingual voicebot for P2P lending using AWS Lex, Lambda, and Polly for speech-to-text and text-to-speech interactions.
- Used a dynamic JSON-based knowledge base with Claude API fallback via prompt engineering.
- Integrated real-time stock prices and financial news via external APIs.
- *Tech: Python, AWS Lex, Polly, Lambda, Claude API , NLP.*

MediCAM (Medicine Scanning APP) - 2024

- Developed a cross-platform app (Android + React) using OCR and fuzzy text matching to identify medicines from packaging scans.
- Achieved 85% accuracy in detecting medicines from low-quality images.
- Tech: Python (Flask), Paddle OCR, Android Studio, React.

Brain Tumor Detection and Segmentation- 2024

- Built a deep learning system using VGG-16 (classification) and U-Net (segmentation) to automate tumor detection in MRI scans.
- Trained models on a Kaggle dataset (253 images), achieving 83.33% accuracy (VGG-16) and 91.68% (U-Net) for precise tumor localization.
- Research paper submitted to ICDTBESDVB 2025 (IIT Dhanbad).
- Tools: Python, TensorFlow, Keras, OpenCV.

Loan Approval Prediction System- 2024

- Developed a machine learning-based web application to predict loan approval outcomes using applicant financial and demographic data.
- Achieved 83% accuracy using Logistic Regression, outperforming SVM, Random Forest, and Decision Tree models after extensive preprocessing and evaluation.
- Tech: Python, Pandas, Scikit-learn, Streamlit, Jupyter Notebook, Matplotlib, Seaborn

Quiz App – 2023

- Created Android app with Firebase backend, featuring role-based logins, real-time scores, timers, and interactive UI.
- *Tech: Android Studio, Java, Firebase.*

Certifications & Publications

Research Paper - "Brain Tumor Detection using VGG-16 and Segmentation using U-Net architecture", (July 2025, Submitted to ICDTBESDVB 2025 IIT Dhanbad Conference)
Certification - Machine Learning Specialization Course by DeepLearning.AI and Stanford Online - 2025

CORE SKILLS

Technical Skills:

- **Languages**: Python, Java, JavaScript ,React
- **ML/NLP**: Scikit-learn, TensorFlow, Keras, PaddleOCR, Claude API , Spacy
- **Visualization**: Excel, Power BI, Streamlit
- **Tools**: Jupyter, VS Code, Git, Google Colab , Postman

Soft Skills : Problem-Solving & Analytical Thinking, Time Management & Organization, Communication, Team Collaboration, Adaptability & Learning Agility, Project Management

Achievements and Positions of Responsibility

- Two-time Semi-Finalists in Datathon (Data Science Flagship Event) in 2022 and 2024