

# Rishika Mamidibathula

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## EDUCATION

### Columbia University

New York, US

*Master of Science, Data Science*

*Expected Dec 2026*

- Coursework: Deep Learning, Generative AI Systems, Robot Learning, High Performance Machine Learning, Statistical Inference and Modeling, Causal Inference, Probability and Statistics, Data Analysis and Visualization.
- Data Science Institute Student Council Member.

### Vellore Institute of Technology

Vellore, IN

*Bachelor of Technology, Computer Science and Engineering - Data Science, CGPA: 4/4*

*May 2023*

- Rank: 7 (Top 4%), Recipient of Merit Scholarship 2019 - 2023, Served as Program Representative: 2019 - 2023.
- Coursework: Artificial Intelligence, Mathematical Modeling, Image Processing, Business Intelligence and Analytics, Predictive Analytics, Natural Language Processing, Machine Learning, Social and Information Networks.

## WORK EXPERIENCE

### Software Engineer

Aug 2023 - Jul 2025

*Shell*

*Bengaluru, IN*

- Spearheaded the LE Automation project by developing a financial forecasting model in Databricks, integrating outputs into Power BI to support strategic planning and reduce operational costs by \$100K annually.
- Oversaw the deployment of multiple RPA bots using Blue Prism, ensuring reliable, scalable automation while optimizing end-to-end process efficiency, saving approximately 120 hours of manual effort per quarter.

### Technical Analyst Intern

Jan 2023 - Jul 2023

*Novartis*

*Hyderabad, IN*

- Developed a net-zero emissions initiative by applying predictive modeling to environmental data using Python, Alteryx, and Qlik Sense, achieving a 19% annual reduction in carbon emissions.
- Built NLP pipelines by creating a custom corpus from clinical trial results to extract actionable insights and automate analysis, reducing manual effort by ~40% quarterly.

### Data Visualization Intern

Feb 2022 - Mar 2022

*Saint Louis University*

- Developed Tableau dashboards to analyze campaign performance metrics, supporting data-driven decisions that enhanced campaign efficiency and optimized resource allocation.

## PROJECT AND RESEARCH EXPERIENCE

### Automated Kidney Disorder Detection | *Python, TensorFlow, VGG19, Fine-Tuning*

[GitHub](#)

- Developed a deep learning-based CT kidney image classification system using transfer learning with VGG19, incorporating grayscale normalization and data augmentation to achieve 99.2% accuracy, 99% precision/recall, and a ROC-AUC of 0.992 across four clinical classes (Normal, Cyst, Stone, Tumor), reducing misclassification by 50% relative to baseline models.

### Ghost Writer AI | *Python, Streamlit, OpenAI GPT-4o, DALL-E 3, REST APIs*

[GitHub](#) | [Demo](#)

- Engineered a full-stack AI content generation system integrating GPT-4o for structured text synthesis and DALL-E 3 for image generation, using modular prompt templates to support multi-tone and variable-length outputs. Designed a scalable Streamlit-based deployment with secure API key management, session-level state handling, and optimized I/O pipelines, achieving <2s average latency and 99%+ API reliability under concurrent usage.

### Dr. Pixel | *Python, Streamlit, Google Gemini Vision, PIL*

[GitHub](#) | [Demo](#)

- Built an AI-powered medical image analysis system leveraging Google Gemini Vision to generate structured, educational interpretations across multiple imaging modalities. Implemented optimized image preprocessing and compression pipelines reducing file size by 60%, secure API key management, and safety-focused output constraints, achieving <3s inference latency in real-time deployment.

## TECHNICAL SKILLS

**Languages:** Python, SQL, R, JavaScript, Java, C++, C

**ML/AI:** TensorFlow, PyTorch, scikit-learn, OpenCV, Recommendation Systems, LangChain, CrewAI, Multimodal LLMs

**Tools:** Git, Docker, Streamlit, FastAPI, Databricks, Power BI, Tableau, Alteryx, W&B