







# Rekhansh Raje Deshmukh

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## EDUCATION

- **Bachelor of Technology in Computer Science and Engineering** CGPA: 8.0/10  
Vellore Institute of Technology (VIT), Bhopal, India August 2021 – September 2026 (Expected)
- **Higher Senior Secondary Education** 80%  
Ryan International School, Gurgaon, India April 2020 – March 2021

## PROJECTS

### Scalable Phishing Detection Pipeline — Machine Learning for Network Security

- Engineered a modular ML pipeline in **Python** for data ingestion, validation against custom **YAML** schemas, transformation, and batch prediction.
- Utilized **Pandas**, **NumPy**, and **Scikit-learn** to perform efficient data manipulation, feature engineering, and train predictive models.
- Containerized the application with **Docker**, creating a reproducible environment that simplifies deployment across any platform.
- Integrated **AWS S3** for scalable cloud storage of datasets and serialized models (using **Pickle**), enabling automated data persistence.
- Developed a user interface with **Flask** and **Jinja2** to present model predictions and security alerts in an accessible format.

### AI-Powered Psychological Support Chatbot

*Technologies: React, Python, Jinja2, Ollama, Corrective RAG Framework*

- Developed a full-stack AI chatbot to provide initial psychological support and analysis, focusing on generating safe and reliable responses.
- Implemented a novel **Corrective RAG framework** with **Ollama** on the backend to significantly reduce AI hallucinations and improve conversational accuracy.
- Automated the curation of a specialized 10,000+ item dataset using **Python** scripts, achieving a 75% reduction in manual data collection time.

## CERTIFICATIONS

- **Oracle Certified Data Science Professional** August 2025
- **The Complete Agentic AI Engineering Course** 2025
- **First Certificate of English (FCE)(B2)** April 2022

## SKILLS

- **Programming Languages:** Python, SQL, C++
- **Data Science/ML:** NumPy, Pandas, Scikit-learn, OpenCV, LangGraph, CrewAI, OpenAI Agents SDK
- **Tools & Platforms:** Microsoft Power BI, MongoDB, Requests, Selenium, SSIS, SSAS, SSRS, GitHub Actions, Docker, AWS, MLflow, Apache Airflow

## EXTRACURRICULAR ACTIVITIES

- **Smart India Hackathon Internal Finalist** March 2024
- **Cyber Warrior Club – Research and Development Team Lead**

## PUBLICATION

- Rekhansh Raje Deshmukh, Dr. Ajay Kumar Phulre. “Deep Learning-Based Detection of Oryza sativa Crop Diseases: A Focus on Bacterial Blight, Explosions, Brown Stains, and Tungro.” *Under review, expected 2025.*