# KURNOOL RISHI KUMAR REDDY

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## **Professional Summary**

Software Engineering student pursuing an Integrated M.Tech at VIT-AP (2022–2027), with strong foundations in Java, Python, full-stack development, and applied machine learning. Experienced in building production-level projects including deepfake detection, intrusion detection systems, and gesture-based automation. Fast learner, effective communicator, and problem solver with proven teamwork through academic clubs and a DRDO internship.

#### **Technical Skills**

Languages: Java, Python, C, R, JavaScript, TypeScript, HTML, CSS, SQL, XML

Frameworks/Libraries: React.js, Node.js, Framer Motion

Tools: Git, VS Code, Android Studio, Figma, Firebase, Ubuntu, Cuckoo Sandbox, Altair

Concepts: OOP, Data Structures, REST APIs, Machine Learning, Model-Based Code Generation, Web Scrap-

ing, Browser ML Optimization

## **Projects**

## E-Commerce Platform with Bargaining — React, Node.js, TypeScript

Developed a complete web-based platform similar to Amazon with a unique bargaining feature for dynamic pricing. Designed modern UI using Framer Motion and documented the system for future scalability.

## Home Automation with ESP32 — IoT, Mobile App

Built a smartphone-controlled system for real-time home appliance automation. Integrated sensors, relay modules, and documented the full system wiring and control logic.

## Gesture-Based Slide Controller — Python, OpenCV, Raspberry Pi

Developed a Python-based hand gesture recognition system to control PowerPoint slides. Enabled webcam/mouse simulation via Raspberry Pi. Authored complete usage and setup documentation.

## Deepfake Detection using CNN + ResNeXt-50 — Deep Learning, Python

Optimized a model for classifying deepfake vs. real images using a refined CNN architecture. Worked with Kaggle datasets and documented training, preprocessing, and tuning steps.

#### Intrusion Detection System (IDS) — Machine Learning, Cybersecurity

Developed a Random Forest-based IDS that detects anomalous network traffic and sends real-time Slack alerts. Deployed model with live monitoring and clear operational documentation.

#### Student Performance Analysis — ML Pipeline, Classification

Preprocessed academic datasets and built predictive models to analyze student performance. Managed missing data, outliers, and created an interpretable pipeline for classification.

## Live Sign Language Conversion (Web App) — React, Browser ML

Developed a real-time sign language-to-text converter using browser-optimized machine learning. Achieved low-latency predictions without server dependencies.

#### **Developer Portfolio** — React, Vite, TypeScript

Created and deployed a portfolio website with a modern responsive layout, smooth animations, and performance optimization using Framer Motion.

## Internship Experience

#### Software Intern – DRDO (Research Centre Imarat)

May - July 2024

Worked with Altair for model-based code generation. Contributed to internal tools and gained hands-on ex-

perience building a live ML-powered sign conversion site using React. Participated in real project reviews and learned efficient deployment and optimization workflows.

#### Education

VIT-AP University

2022 - 2027

Integrated M.Tech in Software Engineering (Currently in 3rd Year)

Sri Chaitanya Junior College

2020 - 2022

Intermediate (M.P.C)

Sri Chaitanya Techno School

Graduated 2020

## Campus Leadership & Clubs

## PR Team Member - Next Nexus Club

Nov 2024 - Mar 2025

Mentored students in writing and submitting research papers. Coordinated with professors to facilitate academic collaboration.

#### Research Team - Innovators Quest Club

Jun 2023 - Apr 2024

Managed event planning, documentation, and schedule tracking. Improved research coordination and backend logistics.

## Cloud Computing Enthusiast – CSI Club (SPM)

Jan - Jun 2023

Explored cloud platforms and virtualized services. Built foundational skills in deployment and cloud architecture understanding.

#### Soft Skills

• Communication & Collaboration

• Time Management

• Critical Thinking

• Problem Solving

• Teamwork & Coordination

• Adaptability

## Languages

• English – Fluent

• Hindi – Intermediate

• Telugu – Native