

# Ronit Reddy

Hyderabad, India · [ronitvoila12@gmail.com](mailto:ronitvoila12@gmail.com) · +91 91828 58977 · [LinkedIn](#) · [GitHub](#)

---

## EDUCATION

### Woxsen University

Hyderabad, India

Bachelor of Technology, Computer Science and Engineering, GPA: 8.72/10

2023 – 2027

**Relevant Coursework:** Artificial & Computational Intelligence, Machine Learning, Deep Learning, Data Analytics, Data Analytics & Visualization, Probability & Random Variables, Engineering Mathematics, Data Structures & Algorithms, Design & Analysis of Algorithms

---

## WORK EXPERIENCE

### Ascendion

Hyderabad, India

#### AI Engineer Intern

Jun 2026 – Present

- Developing an enterprise AI lead-generation and qualification assistant that retrieves organizational information, maintains conversational context, determines business interest, and supports structured lead capture
- Built a grounded RAG pipeline across 463 indexed portal URLs, achieving 180/180 automated guardrail tests passed for citation accuracy, context isolation, and unsupported-claim prevention
- Integrated 3 tool-based agent actions for knowledge-base retrieval, structured lead capture, and Salesforce synchronization
- Drove end-to-end implementation across frontend development, backend APIs, databases, RAG pipelines, AI-service integration, testing, and deployment within a four-member team

### Woxsen University AI Research Center

Hyderabad, India

#### Biomedical Signals and AI Research Intern

Apr 2026 – Present

- Developed a four-stream Multi-Scale Temporal Convolutional Neural Network using the PhysioNet EEG Motor Movement/Imagery Database for subject-independent, four-class motor-imagery classification on previously unseen subjects
- Designed a nested, subject-disjoint 10-fold cross-validation protocol using separate inner subjects for checkpoint selection and outer subjects for final testing, eliminating train/test subject overlap and checkpoint-selection bias
- Achieved  $69.83 \pm 0.36\%$  accuracy,  $57.74 \pm 0.49\%$  balanced accuracy, and  $59.10 \pm 0.48\%$  macro-F1 across three seeds, demonstrating stable performance on unseen subjects
- Conducted architectural ablations, class-sensitive statistical analysis, and neurophysiological validation of motor-imagery-related mu/beta activity; the resulting manuscript is under review at Elsevier's Biomedical Signal Processing and Control

### Tech Mahindra

Hyderabad, India

#### Software Development Engineer Intern

Apr 2026 – Jun 2026

- Developed natural-language functionality for a Nissan North America enterprise AI-agent initiative to retrieve customer PII from databases, reducing dependence on manually written SQL queries and streamlining privacy-compliant customer-data access
- Contributed to a privacy-compliance review and controlled information-sharing pipeline based on state-specific privacy regulations, aligning the information-sharing workflow with state-specific privacy, governance, and security requirements

### Bharat Electronics Limited

Hyderabad, India

#### Technical Intern

Mar 2026 – Apr 2026

- Developed DocMind AI, a fully offline document-analysis and RAG desktop application packaged using jpackage, enabling sensitive local documents to be analyzed without transmitting information to external cloud services
- Developed a three-tier natural-language-to-SQL query engine combining deterministic date and numerical parsing with local-LLM fallback, reducing unnecessary LLM invocations for common structured queries and improving query-response efficiency
- Implemented local real-time voice detection and transcription using Whisper, FastAPI, and ONNX, enabling close to 100% offline speech processing and eliminating dependence on external transcription APIs

### Jigya Software Services

Hyderabad, India

#### Full-Stack and Automation Intern

Nov 2025 – Feb 2026

- Developed a modular React and Vite school-management dashboard enabling drill-down and comparative analysis across three districts and constituent schools, surfacing disparities in participation and grades without requiring manual review of raw data
- Built an AI-assisted voice-to-form workflow for IRS Form 1040 that converted speech into structured JSON and dynamically mapped extracted values to form fields, eliminating hard-coded mappings for supported fields
- Re-engineered a FastAPI reporting system by pushing date-range and filtering logic into SQL, reducing report-generation time by approximately 75%

---

## KEY PROJECTS

### PharmaLens: A Verified and Modality-Aware Retrieval-Augmented Generation System for Pharmaceutical Regulatory Document Intelligence

- Developed an end-to-end verified hybrid RAG system for pharmaceutical regulatory documents, including EPAR/SmPC documents, FDA product-specific guidance, and citizen petitions
- Designed PharmChunk, a structure-aware indexing method that improved macro Recall@5 by approximately 5.6 percentage points over fixed-window chunking while reducing cross-section evidence mixing
- Combined BM25 and dense retrieval using reciprocal-rank fusion, raising macro Recall@5 to 1.000—10.9 percentage points above vector-only and 3.3 points above BM25-only retrieval

- Implemented six-label regulatory-modality classification with 98.7% accuracy and developed PharmaGuard verification, improving answer faithfulness from 81.1% to 92.5% over unguarded RAG
- Constructed PharmaEval v2 with 240 benchmark questions and a 75-case stress suite, confirming significant hybrid-retrieval gains through 10,000-resample bootstrap testing ( $p \leq 0.009$ )
- Submitted the resulting manuscript to the 2026 IEEE International Conference on Artificial Intelligence, Machine Learning & Cybernetics (currently under review)

#### LinguaSense: A Multilingual Detection and Processing System for Seamless Language Identification and Adaptation

- Developed a hybrid RNN-Transformer architecture for multilingual speech recognition and language identification, integrating DeepFilterNet noise suppression to improve robustness under code-switching and noisy real-world conditions
- Achieved 96.45% accuracy on clean speech and 94.12% accuracy at 15 dB, while reducing the word-error rate at 10 dB to 9.20% from 31.45% without DeepFilterNet
- Applied 8-bit quantization and achieved approximately 110 ms latency with a real-time factor of 0.42
- Presented at the 2026 IEEE International Conference on Smart Technologies for Sustainable Development Goals (IEEE Xplore publication pending)

#### Quantum Machine Learning Models for Acoustic Sensor Metrology

- Presented this research work at MatCom-2026: First International Conference on Emerging Horizons in Mathematics and Computation
- Standardized a sonar/acoustic dataset containing 60 frequency-domain features and used PCA to reduce the feature space from 60 dimensions to four
- Benchmarked classical and quantum classifiers, finding the MLP performed best at ~70% accuracy / 0.697 F1 versus ~60% / 0.600 F1 for the strongest quantum model, with no observed quantum advantage

---

### PUBLICATIONS

- Multi-Scale Temporal CNN for Subject-Disjoint EEG Motor Imagery Classification with Physiological Validation | Elsevier's Biomedical Signal Processing and Control journal (Submitted)
- LinguaSense: A Multilingual Detection and Processing System for Seamless Language Identification and Adaptation | IEEE ICSTSDG (2026)
- PharmaLens: A Verified and Modality-Aware Retrieval-Augmented Generation System for Pharmaceutical Regulatory Document Intelligence | IC-AIMLC 2026 (Under Review)
- Data Analytics and AI for Surgical Outcomes Book Chapter Contribution | Elsevier's *AI-Powered Developments in Medical Robotics: Data-Driven Techniques for Enhanced Surgical Efficiency* (Under review)

---

### LEADERSHIP EXPERIENCE

Woxsen University: Student Alumni Relations Committee

Hyderabad, India

Database and Analytics Co-Lead

Jul 2026 – Present

- Co-led the maintenance and governance of the university's master alumni database, using SQL, Excel, and Google Sheets to audit records, remove duplicates, and correct inconsistent information
- Prepared segmented alumni datasets and Power BI analyses for engagement, outreach, and institutional planning, while standardizing alumni-information collection through Google Forms
- Safeguarded sensitive alumni information and converted database findings into decision-ready insights for institutional planning

---

### HONORS AND ACHIEVEMENTS

- Placed among the top 5 of 1,800+ teams at the NextGen AI 2026 National Hackathon (in collaboration with Google Gemini) for NeuroNarrator: Assistive Visual Intelligence System
- Presented "Quantum Machine Learning Models for Acoustic Sensor Metrology" at MatCom-2026, Woxsen University in association with INTI International University, Malaysia
- Selected as one of five Woxsen University students for the 2025 Student Exchange Program at UCSI University, Malaysia
- Officially placed within the top 20% of the academic cohort at Woxsen University.

---

### CERTIFICATIONS

- [Google Advanced Data Analytics Professional Certificate](#) (March 2026)
- [Machine Learning Specialization \(January 2025\)](#)
- [Database Management Essentials](#) (October 2024)
- [Algorithmic Toolbox: University of California San Diego](#) (April 2024)
- [Probability and Statistics for Machine Learning and Data Science: DeepLearning.AI](#) (April 2024)

---

### TECHNICAL SKILLS

**Languages:** Python, Java, SQL, JavaScript, TypeScript

**Machine Learning:** PyTorch, scikit-learn, Hugging Face Transformers, OpenCV, DeepFilterNet, MLflow

**Generative AI & Retrieval:** RAG, LangChain, Groq, Azure OpenAI, Ollama, BM25, FAISS, ChromaDB, pgvector, retrieval evaluation, grounding, hallucination testing

**Backend & Data:** FastAPI, Node.js, Express, REST APIs, PostgreSQL, Prisma, Redis, Socket.IO, Server-Sent Events

**Web, Mobile & Platforms:** React, Next.js, Vite, Flutter, Docker, Git, Linux, AWS S3, Azure AI Foundry