

VAMSI KRISHNA KOLLIPARA

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SUMMARY

Ambitious Machine Learning Engineer and Computer Science graduate student at Indiana State University with expertise in deploying production ML systems using TensorFlow, PyTorch, and Hugging Face. Engineered an AI-powered RAG chatbot that processes 40,000+ data points, reducing response times by 25% for 250+ users. Implemented scalable cloud solutions (AWS, Docker) for optimized ML workflows. At Cognizant, resolved 1M+ records, improving system reliability by 25% through automated ETL processes. Passionate about delivering impactful AI solutions that bridge data engineering and machine learning.

EDUCATION

Master's in computer science, Indiana State University | Terre Haute, IN | GPA: 3.66 **Aug 2023 – Present**

Course work: Artificial Intelligence, Data Visualization, Research (Machine Learning), Cloud Computing, Database Management Systems, Web Programming, Operating Systems

SKILLS

Languages & Frameworks: Python, Java, JavaScript, SQL, HTML, React.js, Express.js, TensorFlow, PyTorch, Hugging Face

Databases & Cloud/DevOps: MySQL, PostgreSQL, MongoDB, Pinecone, AWS, Docker, CI/CD

Tools & Data: Git, Postman, Agile, Data Structures, Algorithms, Power BI, Tableau, ETL, Data Pipelines

Microsoft Suite & IDEs: CoPilot, Azure, Word, Excel, PowerPoint, Power Automate, Teams, Outlook, SharePoint.

RELEVANT EXPERIENCE

Graduate Research & Teaching Assistant, Indiana State University | Terre Haute, IN **Aug 2023 – Present**

- Working on RAG chatbot for the university **to assist students and staff** with queries on courses, deadlines, and university policies.
- Implemented web crawling to extract **40,000+ URLs** and web scraping on **10,000+ websites** to extract relevant university information.
- Engineered an AI-driven grading system using Azure Text Analytics, Power Automate, and Excel to automate assessment of quizzes and essays, resulting in 80% faster grading and consistent feedback.
- Built an ethical plagiarism detection system using **Azure Document Intelligence** for SharePoint to verify submission originality, ensuring academic integrity while **reducing manual review time**.
- Implemented a dynamic attendance tracking system using Forms, Power Automate, Excel, and Power BI to streamline attendance management and provide real-time insights.
- Worked on ML models using **TensorFlow, Scikit-learn, Time-series analysis and PyTorch** for various academic projects.
- Assisted faculty with course instruction, grading, and student mentoring in computer science courses.
- Led lab sessions and tutorials, assisting students with programming, hardware, and schematic implementation.

Data Analyst, Cognizant Technology Solutions | Hyderabad, India

Jul 2022 – Jul 2023

- Managed and optimized 5+ databases using SQL, **improving query performance by 30%**.
- Collaborated with 3+ cross-functional teams to analyze and fulfill business data requirements, ensuring seamless database operations.
- Executed 100+ data queries and transformations monthly using Python and SQL to support data-driven decision-making processes.
- Streamlined 20+ workflows and automated data pipelines, **reducing manual effort by 40% and improving efficiency**.
- Conducted data quality checks across **1M+ records**, resolving anomalies and **enhancing system reliability by 25%**.

Data Analyst Intern, Cognizant Technology Solutions | Hyderabad, India

Jan 2022 – May 2022

- Designed and maintained ETL processes using Informatica PowerCenter, **ensuring accurate and efficient data extraction, transformation, and loading**.
- Leveraged SQL for data querying and reporting, delivering insights that aligned with business objectives.
- Developed 10+ interactive reports and dashboards in Power BI, empowering stakeholders **to visualize and analyze critical metrics effectively**.

OPEN-SOURCE CONTRIBUTIONS

Co-developed WebWeaver, a Python library for browser automation and web scraping, published on PyPI. [link](#)

Sept 2024

CERTIFICATIONS/ PUBLICATIONS

Certified Full Stack Developer with Cloud for Web and Mobile ([Hero Vired](#))

Nov 2023

12th International Conference on Science and Innovative Engineering | Chennai, India

Jul 2022

A New Paradigm of Smart Embedded System for Elder and Physically Challenged Person Using Raspberry Pi
ISBN: 978-93-81288-22-1