

Lekha Bollinani

Full-Stack Developer | AI Graduate Research Student

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Experience

University of Michigan – ISSF (Information Systems, Security, and Forensics) Lab

Nov, 2024 - Present

Research Assistant

- Researching deepfake audio detection, focusing on generating synthetic speech using neural-based audio codecs and analyzing spectrograms for differences from original audio.
- Implementing machine learning models to detect audio manipulations using tools like PyTorch, CUDA, scikit-learn, and librosa.
- Conducting laundering attacks (e.g., noise addition, compression, filtering) to evaluate model performance by training the model with different audio samples.

Transunion

Dec.2021 - July,2024

Senior Developer

- Led the development, test and maintenance of the Warden application, utilized by internal teams for monitoring and managing data flows in the TLOxp application, leveraging Python, Django, Django REST framework, Vue.js, HTML, CSS and Bootstrap.
- Boosted application performance by 85% through implementing Redis-based caching for user sessions in the Warden UI, significantly reducing load times and improving user experience
- Implemented an asynchronous task queue using Celery and Redis DB, optimizing performance of the web application by 70% through efficient background processing of time-consuming tasks.
- Worked on modernization project to migrate application data from an on-premise database to Google Cloud Platform, ensuring scalability and reliability.

Bank of America

Jul,2016 - Nov,2021

Software Engineer 2

- Worked on SPARCK project in Counterparty Credit Risk team that develops and maintains several automated batch processes used to calculate Potential Exposure and Basel Exposures using Monte Carlo simulation for Limit Management and Capital calculations.
- Implemented a cleanup UI using Quartz (Python Framework) as part of housekeeping of application data stored in Sandra (an object-oriented database) and Sybase database.
- Provided on-call support, troubleshooting production issues to ensure high system availability.

Education

University of Michigan

Dearborn, US

Master of Science in Artificial Intelligence (Machine Learning) – GPA 4.0

Sept, 2024 - April, 2026

Courses: Artificial Intelligence, Text Mining, Advance Data Mining, Software Engineering, Intelligent Systems

Chaitanya Bharathi Institute of Technology (Affiliated to Osmania University)

Hyderabad, India

Bachelor of Engineering in Electrical and Electronics – GPA 4.0

Sept, 2012 - May, 2016

Skills

- Programming Languages: Python, SQL, JavaScript, HTML5/CSS3, Vue.js, Linux/Unix scripting
- Frameworks: Django, Django REST Framework, Flask, Vue.js, React, Bootstrap
- Databases: MariaDB, Sybase, Sandra, Mongo DB
- Cloud/DevOps: AWS, GCP, Docker, Octopus, Jenkins, GIT, GITHUB, Agile, JIRA, Confluence

Achievements

- Received the Women Inventor award for 2021 from Bank of America.
- Received Gold award for enhancing the cleanup and archival framework to meet the time critical business request to retain trade data for a longer time to analyze the market volatility due to COVID-19.