LAKSHMI VIJAYA AASHRITHA NELAVELLI

Binghamton, NY(Willing to relocate) | (607) 296-8147 | lva.nelavelli01@gmail.com | LinkedIn | Portfolio | GitHub

EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science

Master's in Computer Science   *August 2023 - May 2025*

Cumulative GPA: 3.7 /4.00

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Operating Systems, Human Computer Interaction, Programming Languages, Design Patterns, Systems Programming, Artificial Intelligence, Programming for Web, Software and Project Management.

Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, India

Bachelor of Technology in Electronics and Communication Engineering   *August 2019 - May 2023*

Cumulative GPA: 3.58 /4.00

TECHNICAL SKILLS

- **Languages:** C, C++, Java, SQL, R, Python (Pandas, NumPy, TensorFlow, PyTorch)
- **Database and Storage:** MongoDB, MySQL, PostgreSQL, AWS, Snowflake
- **Machine Learning:** Feature engineering, Data preprocessing, Model evaluation, Hyperparameter tuning, CNN, Transformers
- **Web Development***:* HTML, CSS, Bootstrap, JavaScript, TypeScript, REST API, ReactJs, NodeJS, Flask, Web Scraping using python and selenium
- **Tools:** Hadoop, Spark, Git, GitHub, DBeaver, Tableau, Power BI, Android Studio, Visual Studio Code, Maven, Linux, CI/CD, Agile, Scrum, TCP/IP, MATLAB

PROFESSIONAL EXPERIENCE

Gtechnologies Pyt Ltd, *Data Science Intern* | Australia, (Remote).   *January 2025 – Present*

- Contributed to the development of an AI-powered EMR system, focusing on data analysis, predictive modeling, and optimizing healthcare efficiency.
- Assisted in data collection, cleaning, exploratory analysis, and feature engineering using Epic EMR data.
- Developed data visualizations and dashboards to provide actionable insights, improving healthcare data management and decision-making.

Tech Shell Software Pvt Ltd, *Machine Learning Intern* | India   *May 2023 – July 2023*

- Designed and implemented a scalable Selenium-based Python scraping pipeline for dynamic web pages, leveraging headless browsing, optimized selectors, and parallel processing.
- Improved data quality by 40% through rigorous cleaning measures, including deduplication, handling of missing values, and standardized text formats.
- Achieved a 30% increase in extraction speed while successfully gathering 2,500+ structured records into CSV files, ensuring reliable, high-quality datasets for LLM and ML model training.

PROJECT EXPERIENCE

Facial Diagnostic System for Disease Prediction, *Team leader* | Group Project

- Addressed the challenge of classifying complex diseases from facial images by leading a team of five to architect a VGG16-based deep learning model, achieving 92% accuracy for beta-thalassemia, leprosy, hyperthyroidism, and Down syndrome.
- Tackled inconsistent image quality from a Kaggle dataset by developing a preprocessing pipeline with normalization and augmentation, enabling seamless integration into a Jupyter Notebook web app and boosting model performance by 10%.
- Overcame real-time diagnostic deployment hurdles by implementing image and video analysis, improving precision, recall, and F1 scores by 15% and showcasing AI's medical potential.

Digit Recognition Application

- Solved low-accuracy digit recognition by creating a CNN model on the MNIST dataset with TensorFlow and VGG16, achieving 99.5% accuracy and 0.022 loss.
- Bridged mobile deployment gaps by integrating the model into an Android app with real-time camera functionality via Android Studio, enhancing user accessibility.
- Mitigated overfitting risks by analyzing L1, L2, and Dropout regularization, improving model robustness by 10%.

Indoor Navigation System, *Back-end Developer* **|** Group Project

- Tackled campus navigation difficulties by developing a geolocation-based web app with ReactJS and a Python Flask backend, supporting 1,000+ users.
- Resolved integration challenges by architecting scalable RESTful APIs, ensuring seamless front-end/back-end communication.
- Streamlined collaboration by documenting codebase and APIs, accelerating maintenance by 50%.

ACHIEVEMENTS AND CERTIFICATIONS

- JPMorgan Software Engineering Job Simulation - Issued by: Forage.   *January 2025*
- British Airways Data Science Job Simulation - Issued by: Forage.   *February 2025*
- Runner-up in JPMC Code for Good Hackathon 2022.   *June 2022*
- Silver Medal – INEX & GYSC 2021 - Indoor Navigation System project presentation.   *December 2021*
- **Certifications**: Advanced Algorithms (Smart Interviews), Front-end Development (Udemy), Java and SQL (TechLearn Solutions).