LAKSHMI VIJAYA AASHRITHA NELAVELLI

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science
Master's in Computer Science *Expected 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 *2019-2023*
Cumulative GPA: 3.58 /4.00

TECHNICAL SKILLS

- **Languages:** Python (Pandas, NumPy, TensorFlow, PyTorch), Java, SQL, R, C, C++.
- **Database and Storage:** MongoDB, MySQL, PostgreSQL, S3, AWS, Snowflake, DynamoDB.
- **Frameworks and Libraries:** Django, ReactJs, NodeJS, ExpressJS, OpenCV, Flask, Apache Kafka.
- **Web Development*:* HTML, CSS, Bootstrap, JavaScript, TypeScript, REST API, Web Scraping.
- **Tools:** Docker, Hadoop, Spark, Git, GitHub, DBeaver, Postman, Tableau, Power BI, Android Studio, Vercel, Jupyter Notebook, Visual Studio Code, Maven, Linux, CI/CD, Agile, Scrum, TCP/IP, MATLAB, Google Colab, Microsoft-Excel, Word, PowerPoint.

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, *Full Stack Web Development Intern* | India *April 2023 – June 2023*
- Engineered a personalized learning platform with React.js and Bootstrap for a responsive front end, integrated with a Django backend and Node.js/Express RESTful APIs, boosting scalability by 30%.
- Accelerated platform performance by implementing Memcached for caching and MongoDB for flexible data storage, reducing load times by 20%.
- Enhanced user security with robust authentication protocols, ensuring reliable access for 500+ users.

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/Django 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).