# Vinay Sivvala

Binghamton, NY | vinaysivvala@gmail.com | Linked In | GitHub | My Portfolio

## EDUCATION

**Binghamton University, State University of New York**
*Master's in Computer Science* *Fall 2023 – Spring 2025*
**Cumulative GPA**: 3.80 /4.00
**Relevant Coursework**: Data Structures and Algorithms, Operating Systems, Programming Languages, Systems Programming, Intro to Artificial Intelligence, Human Computer Interaction, Intro to Machine Learning, Programming for the web, Design Patterns, Software Engineering & Project Management.

**Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering &Technology** *Fall 2019 – Spring 2023*
*Bachelor of Technology in Computer Science*
**Cumulative GPA**: 3.30 /4.00

## TECHNICAL SKILLS

**Programming Languages and Database**: C, C++, JAVA, Python, MySQL
**Machine Learning & AI:** Scikit-learn, TensorFlow, PyTorch, Keras, Feature engineering, Data preprocessing, Model evaluation, Hyperparameter tuning, CNN, Transformers, NLP, Deep Learning Architectures, Data Visualization (Matplotlib, Seaborn, Plotly, Tableau, Power BI)
**Software and OS**: Eclipse, Android Studio, Visual Studio Code, Git, Linux, CI/CD Pipelines
**Web**: HTML, CSS, JavaScript, Bootstrap, Web Scraping Using Python and Selenium

## PROFESSIONAL EXPERIENCE

**Tech Shell Software Pvt Ltd,** *Machine Learning Intern* | India *April 2023 – June 2023*

- Built a web scraping pipeline using Python and Selenium, extracting 2.5K+ records from dynamic pages and storing structured data in CSV format for LLM training.
- Increased extraction speed by 30% using headless browsing, optimized selectors, and parallel processing, improving efficiency.
- Improved dataset quality by 40% through text cleaning, duplicate removal, and handling missing values, ensuring reliable ML inputs.

## PROJECT EXPERIENCE

**Prediction of Diseases based on Facial Diagnosis using Deep Learning,** Team Leader | Group Project

- Developed a VGG16-based transfer learning model to classify beta-thalassemia, leprosy, hyperthyroidism, and Down syndrome, achieving 98% accuracy.
- Designed a preprocessing pipeline with image normalization and augmentation, improving model generalization and classification performance.
- Fine-tuned the VGG16 architecture and optimized hyperparameters, evaluating results using accuracy, precision, recall, and F1 score.

**Digit Recognition App,** Team Leader | Group Project

- Developed a CNN model for digit recognition on MNIST, achieving 99.5% accuracy and 0.022 loss, and integrated it into an Android app.
- Enhanced real-time digit recognition by adding camera functionality for image capture and seamless processing in the mobile application.
- Optimized model performance using Adam and RMSprop, evaluating L1, L2, and Dropout regularization for improved accuracy and stability.

**Speech Emotion Recognition,** Team Leader | Group Project

- Developed an emotion recognition system using LSTM, extracting MFCC features from speech data and achieving 100% validation accuracy in training.
- Built an audio preprocessing pipeline for feature extraction, noise reduction, and normalization, improving model performance and generalization.
- Trained and fine-tuned the LSTM model, optimizing Adam and categorical cross-entropy loss, with accuracy progressing from 23% to 100% over 100 epochs.

## CERTIFICATIONS

- Google Data Analytics Course by Coursera
- British Airways Data Science Job Simulation by Forage
- Attended workshop on "Advanced Data Structures" – VNRVJIET
- Python for AIML Program – Talent Sprint