Vinay Sivvala

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EDUCATION

Binghamton University, State University of New York

Master's in Computer Science   *Expected May 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: C, C++, JAVA, Python

Database: MySQL

Machine Learning & AI: Scikit-learn, TensorFlow, PyTorch, Keras, Feature engineering, Data preprocessing, Model evaluation, Hyperparameter tuning, CNN, Transformers

Software and OS: Eclipse, Android Studio, Visual Studio Code, Git, Linux

Web: HTML, CSS, JavaScript, Bootstrap, Web Scraping Using Python

PROJECT EXPERIENCE

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

- Designed a **deep learning model** using **transfer learning** with **VGG16** to classify diseases like **beta-thalassemia**, **leprosy**, **hyperthyroidism**, and **Down syndrome** based on facial features.
- Built a **data preprocessing pipeline** with **image normalization** and **augmentation** to enhance model generalization and performance.
- Evaluated the model using metrics like **accuracy**, **precision**, **recall**, and **F1 score**, achieving **98% accuracy** in multi-class disease classification.
- Achieved optimal performance by fine-tuning the **VGG16** architecture for improved results in disease classification tasks.

Digit Recognition App, Team Leader | Group Project

- Developed a **CNN model** for **digit recognition** with high accuracy on the **MNIST dataset**, and integrated it into an **Android application** for real-time digit recognition.
- Enhanced the **Android app** by adding **camera functionality** for real-time image capture and digit processing.
- Utilized **TensorFlow** for **model deployment** and **Android Studio** for **app development**, ensuring seamless integration of machine learning and mobile technology.
- Evaluated pre-trained models with **Adam** and **RMSprop optimizers**, achieving **99.5% accuracy** and **0.022 loss** with **VGG16**, and analyzed the impact of regularization techniques like **L1**, **L2**, and **Dropout**.

Local Bus Tracking System, Mobile App Developer | Group Project

- Designed and developed a mobile application using **Flutter** and **Dart** for real-time tracking of local buses, improving commuter convenience.
- Integrated **Google Maps API** for live GPS tracking and utilized **Firebase** for backend services, including real-time database management and user authentication.
- Built and tested the application in **Android Studio**, ensuring cross-platform compatibility and a seamless user experience.

ACHIEVEMENTS & CERTIFICATIONS

Certifications:

- Google Data Analytics Course by Coursera
- Attended workshop on "Advanced Data Structures" – VNRVJIET
- PYTHON for AIML Program – Talent Sprint
- Python 3.4.3, PHP and MySQL Training – Spoken Tutorial Project at IIT Bombay

Competitive Coding Achievements:

- Mentored participants in a national-level hackathon organized by VJ Hub, fostering innovative solutions and teamwork.
- Led logistics and operations as the Department Head for Convergence, a prestigious undergraduate technical event.
- Took an active role in organizing and participating in the annual cultural event Sintillashunz as an Event Stall Lead, showcasing strong leadership, teamwork, and event management skills during undergraduate studies.