Vijay Kumar Reddy Gade

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Experience

University of Florida | Research Assistant **July 2024 – Present**

- Designed and fine-tuned transformer-based LLMs, including GPT architectures, to predict molecular interactions, leveraging cutting-edge NLP and generative AI techniques.
- Processed and analyzed extensive multi-omics datasets, electronic health records (EHRs), and medical imaging data, building scalable and efficient data pipelines for ML systems.
- Developed data-driven quality assurance frameworks to enhance the accuracy and interpretability of ML models in real-world applications.
- Collaborated with cross-functional teams to integrate deep learning solutions into pipelines, addressing localization challenges by ensuring model adaptability for diverse global users.
- Utilized Git for version control and deployed high-performance models on AWS, adhering to best practices in scalability, software engineering, and security compliance.

DBYDX Technologies Private Limited(Chatgen) | Data Science Intern **April 2022 – April 2023**

- Enhanced NLP models with Wit.ai for intent detection and entity extraction, achieving a 50% increase in user engagement through improved model performance.
- Built and fine-tuned machine learning models for applications like Quora Question Similarity, leveraging Scikit-learn and NumPy to deliver accurate and scalable solutions.
- Partnered with analysts and UX teams to align ML features with user needs and business objectives, contributing to seamless localization and enhanced user experiences.

Market Data Forecast | Software Developer-Intern (*as a Final Year Student*) **April 2021 – March 2022**

- Designed predictive ML algorithms for an HR Management System, integrating ML solutions with REST APIs to enhance analytics and decision-making processes for 300+ employees.
- Integrated WhatsApp into marketing campaigns, optimizing audience outreach strategies and improving direct communication efficiency.
- Scaled system throughput from 40 to 1,000 messages per second by rearchitecting the system with AWS and JavaScript, ensuring robust performance and scalability.

Projects

Drowsiness Detection System:

- Developed a system with 95% accuracy using DLIB and Python, demonstrating ability to create and validate high-precision software.
- Implemented advanced algorithms for precise measurements, skills applicable to developing and testing verification tools.

COVID-19 detection from chest X-ray images: 1.Created a deep learning classifier and image segmentation network using Python and TensorFlow, showcasing experience with image processing techniques. 2.Utilized SimpleITK for medical image processing, demonstrating ability to work with specialized libraries.

Face Recognition Attendance System (at SCSVMV Univ. for CS Dept.): Implemented Face Recognition Attendance System using Convolutional Neural Networks(CNNs) to ensure precise face recognition with an exceptional accuracy rate exceeding 95%.

Characterizing Acoustic Eavesdropping for Electromagnetic Signals: Working on acoustic eavesdropping via electromagnetic signals using smartphone cameras, employing CNN and wav2vec 2.0 models on the HiperGator platform to advance cybersecurity defenses and enhance digital communication privacy...

Technical Skills

Programming: Java, Python, R, C++
Operatin System / Version Control: Linux/Unix, Git
Data Analysis: Pandas, NumPy, Scikit-learn
Machine Learning: TensorFlow, PyTorch, Keras
Cloud Computing: AWS, Google Cloud
Scripting: Python, shell scripting experience

Certifications and Achievements

- Python (Basic) at Hackerrank (got 5 star coder badge).
- "Google Cloud Fundamentals:Core Infrastructure" and "IT Security:Defence against the digital dark arts" on Coursera.
- Freelancing experience as Computer Science Subject matter expert at Chegg India Pvt. Ltd.(May 2022 – March 2023)

Education

University of Florida **August 2023 – May 2025**
Master of Science in Computer Science *Gainesville, FL*

Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya **July 2018 – July 2022**
Bachelor of Engineering in Computer Science and Engineering; GPA: 3.57 (8.93/10.0)