Tharun Gangaraju

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Education

University at Buffalo, The State University of New York — Buffalo, NY, USA
Masters of Science - Computer Science and Engineering (CGPA: 3.85/4) — *August 2023 – December 2024*

College of Engineering Guindy, Anna University — Chennai, TN, India
Bachelor of Engineering - Computer Science and Engineering(CGPA: 8.82/10) — *August 2019 – June 2023*

Experience

Full Stack Engineer — Aug 2024 – Present
Youro, Co-Op — *Buffalo, NY*

- Designed and developed a health platform using **Java Spring Boot and React**, connecting urologists and patients for efficient diagnosis and communication, and created wireframes for web and mobile pages using **Figma** to ensure mobile responsiveness.
- Implemented **dynamic forms** for customized follow-up questions, enhancing diagnostic accuracy based on patient responses and integrated **real-time chat** using WebSockets for smooth communication, including message delivery, read receipts, and **integrated Google Meet** for video consultations.
- Incorporating **e-prescriptions for pharmacy integration**, streamlining prescription management for patients.

Technical Skills

Programming Languages: C, C++, Python, Java, JavaScript, HTML, CSS, MySQL
Machine Learning: Pytorch, NumPy, Scikit-learn, Matplotlib, Pandas, TensorFlow, Keras, PySpark
Cloud Technologies: Azure, AWS (ECS, S3, RDS, Lambda)
Frameworks: ReactJs, NodeJs, ExpressJs, Springboot, Apache Hadoop, Figma
Virtual Machines: Kali Linux, Metasploitable

Academic Projects

Calorie Estimation of Food Images — May 2024 – July 2024

- Implemented **object detection** using YOLO to identify and label food items in images with bounding boxes and confidence scores and utilized the MiDaS model for **depth estimation**
- Created stereo images and performed **3D reconstruction**, calculating disparity maps, generating 3D point clouds, and constructing a convex hull to estimate food volume and calculated calories by using predefined food density values

Deep Fake News Detection — Feb 2024 – May 2024

- Implemented multiple advanced models for classification, including **ResNet, GRU, Transformers, Deep BERT, BERT-CNN, and BERT-CNN-LSTM** (Hybrid) and used NLP for pre=processing the data
- Applied **GloVe embeddings** for word representations in combination with transformer-based architectures.

Cloud Intrusion Detection System — March 2023 – May 2023

- Created a dataset by collecting network traffic by generating attacks from **Kali Linux VM to Metasploitable 2** VM and storing the data in a CSV file.
- Developed a hybrid ensemble model (with a genetic algorithm), combination of Decision Tree and LSTM to predict incoming packets coming from the cloud (Microsoft Azure), and deployed the model in Azure Cloud.

College Media — April 2022 – June 2022

- Designed a **chat web application** where users can communicate with each other and included a **group chat** feature as well. It was built for CEG students to interact with each other and seniors through chatting. The application also helped students learn about college's events and clubs.
- Contributed to backend by building a database and storing information in 'PHPMyAdmin' and worked on styling part in frontend. HTML and CSS, along with Bootstrap, JavaScript, jQuery, PHP, and MySQL, are technicalities leveraged in the project.

Publications & Certifications

Effective Intrusion Detection System Using Hybrid Ensemble Method for Cloud Computing, **IEEE**.
Problem Solving, SQL, **HackerRank**
Project development of Applicant Credibility Prediction for loan approval, **IBM**