Phani Visweswara Sandeep Chodavarapu

+1 (716)-612-0738 | phanivis@buffalo.edu | Linkedin - phanivsandeep | Github - phanivsandeep | Buffalo,NY. 14221

Education

M.S., Computer Science Dec 2024

University at Buffalo, The State University of New York *Buffalo, New York*

- **Coursework**: Algorithms, OS, Databases, Deep Learning, Machine Learning, Computer Vision

Experience

Programmer Analyst Jul 2021 - May 2023

Cognizant Technology Solutions *Hyderabad, India*

- Developed and maintained a full-stack web application using React, jQuery, Java, Spring Boot, and SQL.
- Implemented streamlined development processes with BitBucket, Bamboo, and Urban Code Deploy to enhance development productivity by 25%.

Programmer Analyst Trainee Mar 2021 – Jul 2021

Cognizant Technology Solutions *Remote, Chennai*

- Collaborated on Java, SQL, Angular, Spring Boot, JUnit, AWS, Docker projects.
- Assisted managers in delivering a real-time customer service project, using insights to improve customer satisfaction by 10%.

Application Development Intern Mar 2020 – Jun 2020

COSUPS *Hyderabad, India*

- Led a team of 5 interns and developed a real-time Android application integrated with Firebase for COSUPS, an event management company.

Projects

Historical Document Translation and Restoration | *Python, PyTesseract, Helsinki-NLP, OpenCV* Jun 2024 - Aug 2024

- Developed an end-to-end pipeline for translating and restoring historical documents, leveraging PyTesseract for OCR, Helsinki-NLP for translation, and OpenCV for image inpainting.
- Engineered a solution to maintain the visual integrity of historical documents post-translation by accurately matching the original font style, size, and layout using custom bounding box algorithms.
- Optimized text extraction and translation processes, achieving reliable text conversion while preserving document aesthetics.
- Implemented advanced image processing techniques, including contour detection and font estimation, ensuring computational efficiency and scalability of the application.
- Fine-tuned pre-trained models for OCR and translation, enhancing accuracy and adaptability for historical datasets, contributing to improved data accessibility and preservation.

Real-time Twitter Sentiment Analysis | *Pytorch, Python, Flask, React, AWS S3* Jan 2024 - May 2024

- Architected a scalable sentiment analysis application using LSTM, BiLSTM, and GRU, achieving model accuracies of 75%, 70%, and 78%, respectively.
- Developed a full-stack pipeline with Flask and React, integrating the Twitter API for real-time data retrieval and sentiment prediction.
- Deployed the application on AWS S3, ensuring high availability and enabling seamless scaling to handle increased user demand.

E-commerce Shopping Database | *PostgreSQL, Streamlit, AWS RDS, Python, psycopg2* Jan 2024 - May 2024

- Engineered a robust e-commerce database architecture using PostgreSQL, hosted on AWS RDS to ensure reliability and scalability with 99.9% uptime.
- Developed and integrated a Streamlit-based front end, facilitating secure and efficient CRUD operations, enhancing database interaction speed by 40%.
- Implemented ACID principles and advanced security protocols, significantly reducing data vulnerability and ensuring transactional integrity.

Mail Order Pharmacy | *Angular, Springboot, Mockito, MySQL* Jun 2021 - Aug 2021

- Built and architected a secure and reliable mail order pharmacy application using MySQL, Angular, SpringBoot.
- Integrated with payment processing systems and shipping carriers to automate 80% of order fulfillment process, reducing processing time by 25%.

Road Obstacle Detection | *Python, OpenCV, YOLO, SciKitLearn* Mar 2021 – Jun 2021

- Created YOLO-based model for real-time road obstacle detection (e.g., potholes, cones, pedestrians) achieving 83% accuracy in testing.

Smart Attendance | *Java, Firebase, Python, Android Studio* Jan 2020 – Apr 2020

- Constructed a highly accurate and consistent attendance-marking application, checks schedules and GPS ranges to eliminate location based attendance errors by 90%.
- Register students and instructors by MAC address to ensure accurate attendance marking and eliminate network spoofed attendance errors by 90%.

Tracking Speed of Vehicles | *Java, Firebase, Android Studio* Dec 2019 – Apr 2020

- Engineered a camera-based checkpoint system, reducing hardware and infrastructure costs by 50%, to capture vehicle timestamps efficiently.
- Accomplished a 50% cost reduction by utilizing checkpoint timestamps to calculate vehicle speeds, enhancing traffic monitoring and road safety.

Technical Skills

Languages: Python, Java, JavaScript, SQL, C, C++, C#, Bash, Swift, Kotlin, NoSQL, HTML/CSS, PHP
Frameworks: TensorFlow, PyTorch, React, Node.js, Angular, .NET, SpringBoot, Django, Flask, JUnit, Maven, BootStrap, JQuery, RestAPI
Databases: MySQL, PostgreSQL, MongoDB, Oracle, SQL Server
Tools: Git, Docker, Kubernetes, AWS, Azure, GCP, Jenkins, Terraform, JIRA, Visual Studio Code, Eclipse, VMware, Azure DevOps, Tableau, PowerBI, Android Studio, XCode, Unreal Engine, Unity
Concepts: Machine Learning, Cloud Computing, Microservices, CI/CD, DevOps, Data Analytics, RESTful APIs, Agile Methodologies, System Design, Security Protocols, Deep Learning, Computer Vision
Certifications: AWS Cloud Practitioner, DSA through Python, IoT, Android App Development

Involvements & Achievements

- **Resource Manager, Training Coordinator** at Advanced Academic Center - Core Committee
- **Python, Android App Development Trainer, Student Mentor** at Advanced Academic Center
- Part of World Youth Council Organization Teach from Home .
- Achieved **2300+ Hackos** in HackerRank.