Soujan Vakulabharanam

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Education

University at Buffalo **August 2022 - January 2024**
Masters in Data Science and Applications(CGPA of 3.92 /4.00) *New York, USA*

Mahatma Gandhi Institute of Technology **August 2018 - July 2022**
Bachelor of Technology in Computer Science and Engineering(CGPA of 7.9/10.00) *Hyderabad, India*

Experience

Analinear Imaging Systems **March 2022 – June 2022**
Software Development Engineer Intern *Hyderabad, India*

- Designed and created over **15+** dynamic webpage layouts and user interfaces leveraging standard **HTML/CSS and javascript**,results in a notable **12%** increase in website engagement.Seamlessly integrated data from **5 diverse back-end services and databases**, attaining an impressive **40% reduction in data retrieval time**, and boosting internal processes. Engaged in meticulous software documentation maintenance, ensuring smooth functioning of **4 complex systems** with a uptime of **98.6%**.
- Acted as a vital role in image processing projects, emphasizing **structural analysis**, identified over **500+ structural cracks** in different buildings.These efforts helped to improve safety measures and an impressive **10% reduction** in costs. Played a substantial role in obtaining **15%** growth in overall productivity.

Indian Servers **May 2021 – July 2021**
Machine Learning Intern *Vijayawada, India*

- Collaborated as a part of a dedicated team of 6 on development of **pneumonia detection system from X-ray** images by applying deep learning techniques. As a team member, contributed to accomplish an impressive diagnostic **accuracy rate of 95%**, led to a significant **40% reduction in misdiagnoses**, ultimately improving patient care. Delved into intricacies of **neural networks**, obtained hands-on proficiency by building networks from scratch.
- Conducted comprehensive research on pre-trained models **VGG 16, VGG 19 and YOLO V4** thoroughly analyzing architectures and practical applications. Research led to **20% reduction in model development time** for subsequent projects, increase in overall productivity.

Projects

Mouse Simulation System using Convex Hull Algorithm | *Opencv,PyAutoGUI,HCI* | live-video.

- Devised a **gesture-based mouse control system** capable of replicating all **5 mouse operations** in response to hand movements and gestures.
- Incorporated Convex Hull algorithm to analyze each frame of the real-time video feed, undergoes series of steps results in a remarkable detection accuracy rate of **91%** for mouse tasks.

E-commerce website using MERN stack | *NodeJS, React MongoDB and Express* | Git-hub.

- Crafted a user-friendly e-commerce application, featuring robust login and registration systems and along with **4 distinct catalogs** and each tailored for specific functionality.
- Application encourages customers to explore diverse products,spanning over **20 different products** in each domain, select items of interest, and add it to shopping cart and complete transactions securely ensuring a streamlined and efficient online shopping experience for users.

Achievements

- Authored a research paper titled Mouse Simulation System using Convex Hull Algorithm, published in the **'International Journal for Modern Trends in Science and Technology'**, Volume 8, Special Issue http://www.ijmtst.com/volume8/si08/IJMTST08S0827.pdf
- Secured a commendable rank of **3683 out of 25000 participants** in the Smart Interviews coding challenge, demonstrating strong problem-solving and coding skills. https://smartinterviews.in/certificate/5b5dfd4d
- Awarded **'Pat on the Back'** for contributions during internship and offered a full-time position on the core team, a testament to commitment and skills.
- Adeptly solved over 400 problems across various platforms.
- Certified as an Amazon Web Services (AWS) Cloud Foundational professional.

Technical Skills

Programming Languages: C,C++, Python, Java
Technologies/Frameworks: HTML,CSS,PHP, JavaScript,JSP, XML, jQuery, MVC,node.js,React,Express
Data Science:ML Algorithms, Neural Networks, Deep Learning, Transfer Learning,NumPy, Pandas, Matplotlib, OpenCV, Sklearn, Tensorflow, Keras
Databases:MySQL,Oracle,MongoDB
Tools:GitHub,Jira,Visual Studio Code, Eclipse