Faraz Omar

+1(438)-467-1600 | farazomar.official@gmail.com | LinkedIn

WORK EXPERIENCE

Aligarh Muslim University **Aligarh, India**
Undergraduate Research Intern *Sep 2021 - May 2022*

- Analyzed and processed a dataset of 10,000 fluid flow samples, significantly reducing training time by utilizing GPU acceleration techniques, leading to a 50% decrease in overall computational resources required.
- Developed and implemented a convolutional neural network (CNN) model to predict fluid flow velocity field with an accuracy of 95%, surpassing the previous state-of-the-art model by 5%.

National Institute of Technology Srinagar **Srinagar, India**
Summer Intern *May 2021 - Sep 2021*

- Collaborated with a team of four to successfully implement the deep learning model in a real-world production environment, resulting in a 50% reduction in customer dissatisfaction rate.
- Developed and trained a deep learning binary classification model to accurately inspect casting products for quality, achieving an overall accuracy rate of 95%.
- Contributed to the research and development of the "Deep Learning Binary-Classification Model for Casting Products Inspection" project, which was published in the prestigious IEEE Xplore library, showcasing expertise and commitment to advancing the field. Doi: 10.1109/PARC52418.2022.9726590.

EDUCATION

Concordia University **Montreal, QC**
Industrial Engineering(Master's) *Graduation Date: Jul 2024*

Aligarh Muslim University **Aligarh, India**
Mechanical Engineering(Bachelor's) *Graduation Date: Aug 2022*

PROJECT EXPERIENCE

Transcontinental Inc. **Montreal, QC**
Implementation of a vision-based neural network system for defect identification *Sep 2023 - Present*

- Implementing automated image processing techniques to analyze over 10,000 product images daily, to identify visual defects made during the manufacturing.
- Collaborating with cross-functional teams to integrate the CNN vision system with the company's existing production line, which will be leading to a projected **30% increase** in overall efficiency.

LEADERSHIP EXPERIENCE

MTS AUV-ZHCET **Aligarh, India**
Chairperson *Aug 2021 - Aug 2022*

- Led a team of 20 engineers in designing and building cutting-edge underwater vehicles, resulting in a 30% improvement in performance and efficiency compared to previous models. Later, the idea was **filed as a patent**, and the government of India granted it. Application ID: 202111048400.
- Developed and executed a comprehensive strategic plan for the university's first-ever underwater robotics competition, resulting in a participation increase of 50% compared to the other universities of the region.
- Established partnerships with industry-leading companies, securing **$20,000** in sponsorship funding for the underwater robotics competition, ensuring its sustainability for future years.
- Developed and implemented a Convolutional Neural Network (CNN) model for the multi-classification of COVID-19 and pneumonia in chest X-ray images, achieving an **accuracy rate of 95%**, significantly outperforming industry benchmarks.
- Led a team of two students and a professor through all phases of the project, including data collection, preprocessing, model development, training, and evaluation, resulting in the successful completion of the project within the specified timeline.
- Presented findings and methodology to a panel of experts at an **international conference** on machine learning, receiving positive feedback and recognition for innovative approach and contribution to the field. Doi: 10.1109/ICACFCT53978.2021.9837356.

SKILLS & INTERESTS

Technical Skills: • Clustering • Data Visualization • Data Science • Statistics • Machine Learning • Deep Learning • Power Bi • Excel • Computer Vision • Data Preparation • Data Modeling • Exploratory Data Analysis(EDA) • Time Series Analysis • Tensorflow • Pytorch • Pandas • Numpy • Matplotlib • Seaborn

Programming Languages: • Python • PostgreSQL • Java • JavaScript • CSS • HTML