TANISHA KHURANA

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EDUCATION

North Carolina State University, Raleigh **Aug 2022 - May 2024**
Master of Science - Electrical & Computer Engineering
Relevant Courses- Digital Imaging systems, Advanced Digital signal processing, Probability and Random Processes

Bharati Vidyapeeth Deemed University, College of Engineering, Pune **July 2014 – July 2018**
Bachelor of Technology - Electronics & Telecommunication Engineering **CGPA** – 9.22/10
Relevant Courses- Artificial Intelligence and Robotics, Data Structures and Algorithms, Information Theory, Signals and Systems

SKILLS

Languages: Python, C/C++, MATLAB, SQL, Git, Bash, Docker **Tools/Platforms:** Amazon Web Services, Arduino, Raspberry Pi
Frameworks - OpenCV, Tensorflow, Keras, Pytorch, Scikit-Learn, Numpy, Pandas

EXPERIENCE

Computer Vision Research Engineer, Wobot.ai **May 2021 - July 2022**
- Engineered solutions to create Proof of Concepts for various use cases in Video Analytics and Smart Surveillance.
- Formulated algorithms for **activity recognition** using **SlowFast and I3d Convnets**, **pose estimation** and **motion detection.**
- Scaled ML models in high-throughput and low-latency using **TF Serving** and **triton.**
- Developed production ready code in dockerized containers and integrated it with the frontend UI.

Research and Development Engineer, Intello Labs Pvt. Ltd **Jan 2020 - May 2021**
- Led the end to end development of a commodity grading system using **Faster RCNN, Mask RCNN and SSD** object detection and object tracking models**.**
- Carried out **K-means Clustering, color segmentation** and **PCA** to classify the commodities by size and colour.
- Implemented models on edge devices such as **NVIDIA Jetson NANO, Xavier and Google coral board** and carried out real time video streaming on multiple Raspberry Pi's.
- Achieved identification accuracy of more than 95% and classification accuracy of approximately 90% and successfully deployed at client site for live usage.

IOT Engineer, Qiggle.ai **Jan 2019 - Oct 2019**
- Designed a predictive analytics solution for industrial applications using **Anomaly detection** and **remaining life estimation**.
- Executed the transmission of data packets for **vibration analysis** using **Socket Programming** with Flask API.

Data Science Intern, Innefu Labs Pvt. Ltd **Oct 2018 - Dec 2018**
- Optimized ResNet 50 and **YOLOv3** models for face detection and weapon detection as part of the AI Vision team and achieved a TPR of more than 98%.

Electronics Engineer, GenElek Technologies Pvt. Ltd **Aug 2018- Oct 2018**
- Worked on building affordable and light-weight lower limb exoskeletons for the specially-abled.
- Responsible for the actuation and simulation using **Arduino board, actuators** and **EMG muscle sensor** and innovated the algorithm for sitting and standing.

PROJECTS

Modeling Food Web and Forecasting Populations for Endangered Wildlife Species **April 2021-June 2021**
- Collaborated with project partner Endangered Wildlife OÜ through Omdena to build an automated data collection and extraction tool that uses BERT QA model to track the population of different species over time.

Helping the Energy Industry Achieve Digital Transformation Through AI **July 2021 - Aug 2021**
- Trained detection models to automate the conversion of Piping and Instrumentation Diagrams (P&ID) to their digital format.

A Real Time System for Water Quality Measurement using GSM **March 2018**
- Devised a cost-effective and efficient solution to measure and monitor water quality parameters such as temperature, pH value and turbidity and send alerts in real time.
- Published paper in International Journal of Industrial Electronics and Electrical Engineering , Volume-6,Issue-3