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EXPERIENCE

GENESYS INTERNATIONAL CORP: Senior Research Engineer

Mumbai Jan 2021

- Automated workload of **2000** employees using **machine learning pipelines** for foreign and domestic data
- Implemented algorithm for **geo-referencing** each pixel of **2D RGB image to it's 3D point projection** in LiDAR data
- Worked on **3d town planning in jaipur, thane and pune** region for **thousands of kilometers** of street-view data
- Built pipelines & models for **aerial and drone imagery for mumbai** projects like building footprint, road, tree canopy **segmentation**
- Worked on **multi-object-tracking for triangulation** on street view data using SOTA open source implementations (**custom datasets**)
- Worked on **optimized zero-shot depth detection** with intel-midas for drone **navigation** and **asset depth detection**
- Built **models for LiDAR point clouds** and integrated them with intel **Open3D-ML data-processing & visualisation** toolkit
- Worked on **automatic foreground removal for high resolution images** using LaMa from samsung research
- Built models and algorithms for **multiple telecom tower panel segmentation, key-point detection, measurement and rust detection**
- Built multistage in-house **OCR models** for **shop hoarding** and **house number plate** text detection and recognition (**hindi and english**)
- Implemented **licence plate blurring and face blurring** solution for **thousands of kilometers**.
- Engineered in-house tool for annotation of **LiDAR point clouds** using **WebGL and python microservices with Flask and FastAPI**
- Engineered in-house tool for annotation of raster data using **QGIS open-source application**
- Engineered in-house tool for **interconversion of different data formats** - LiDAR and raster data.
- Built PoC for **viewing and navigating through high resolution panoramic images** using panellum
- Build models for **roof-top asset detection** like water tanks and antennas for mumbai region

CREATE JOY TECHNOLOGIES (CREJO.FUN): Machine Learning Engineer

Bangalore Mar 2021

- Implemented light-weight **optimized algorithm O(n)** for **motion detection** in video chat applications and **worked with service workers**
- Built **client side models in tensorflow.js** for gesture recognition, voice command recognition, pose correction and BG removal
- Implemented ML powered **dynamic augmented reality face mask using WebGL** and tensorflow.js **from scratch**
- Implemented **motion capture** from 2D RGB webcam stream to **control 3D avatar** using WebGL and 3D posenet

IREADRX.AI: NLP Engineer

Bangalore Mar 2021

- Worked on **PDF analytics and bioassay detection** from patent documents using topic modelling, semi-supervised learning and AutoML
- Extracted mol files (**structure information**) from **2d-image of markush structures** in PDF file pages using **Java**

OPTISOL BUSINESS SOLUTIONS: Data Analyst

Coimbatore Dec 2020

- Built end-to-end gesture recognition system with **only 7 data samples** using state-of-the-art one shot learning techniques
- Worked with **MediaPipe, BlazePose, TFLite, and Pytorch**
- Implemented siamese networks with different custom loss functions, matching networks, prototype networks, online learning etc

LOGITECH INTERNATIONAL S.A: Product Engineer Intern

Chennai Jan 2020

- Developed prototype for generic tool/algorithm to validate over the air **Bluetooth Low Energy logs** for Ellysis and **render sequence diagrams** through web UI and **Flask microservice**.
- Implemented **dynamic programming** algorithms with reusable code base. Cython for **optimisation** and faster processing.
- Solved **architecture and design** problems and UX problems under the guidance of experienced team members

NEWGEN IEDC: Incubatee & Computer Vision Developer

Chennai Jan 2019

- Successfully demonstrated and **secured funds from MHRD India** - A.I Research for Primary Sector.
- Worked with **edge devices** like Raspberry Pi, Jetson Nano, microcontrollers and drones
- Implemented various SOTA Based CNN architectures using Tensorflow with **quantisation and TensorRT optimisation**

TALENT ACCURATE: Frontend Developer Intern

Ontario, Canada Jun 2018

- Worked with **AngularJS** and chrome extensions. Designed web pages with pure CSS
- Stack included AngularJS, HTML5, CSS and Vanilla JavaScript

EDUCATION

Dr. MGR Educational And Research Institute

Maduravoyal, Chennai July 2017

- Candidate for Bachelor of Technology degree in Computer Science and Engineering
- Aggregate CGPA of **8.0** • Co-Founded MGR Coding Club • Member of Computer Society of India

Kendriya Vidyalaya NAD Aluva

Kochi, Kerala, 2014

- AISSE CGPA **9.8** and Senior AISSCE CGPA **92%** in Sciences • Secured **97 out of 100 in C++** AISSCE Board Examination