


Professional Experience

MAASTRO Clinic, *Student Research Assistant*
Dec 2019 – present | Maastricht, Netherlands


Currently performing research and implementation of 3D segmentation networks for CT scans. The use-cases explored are nodule segmentation in lung cancer screening CTs; OAR and GTV segmentation in NSCLC pre-treatment CTs.

Focus Areas:


- Segmentation driven quantitative evaluation of GAN-based domain adaptation for inter-vendor CT scans.
- Development and design of structured training pipeline for 3D segmentation using memory and speed efficient practices.

BlinkIn, *Machine learning R&D Engineer* 
Jun 2018 – Aug 2019 | Hyderabad, India

Initiated AI implementations for an automated virtual customer support engine. Played a key role in transforming the customer support pipeline from end to end video streaming to a layered intelligence pipeline by integrating object detection, image classification, action detection and task suggestions. Through these additions, BlinkIn was able to successfully run a pilot for a visual road assistance bot with ADAC, Munich.


Cognitive Machines Software Solutions,
Associate Digital Image Processing Engineer 
Jul 2017 – Apr 2018 | Bangalore, India

Developed and worked with implementation of a proprietary Image Processing Studio. Contributed largely to the pipeline with object detection, emotion recognition, facial recognition, feature detection and shape estimation modules across Android, iOS and Edge Compute Devices.

Digital Impact Square, TCS Foundation and MIT Media Labs,
NLP Developer Intern 
Jun 2016 – Dec 2016 | Nashik, India

Built an avatar-ified web-based YouTube video-captioning system for sign-language. Available subtitles or auto-generated captions were translated to sign language gesture captions using language rule sets and a knowledge base. Co-authored a paper publishing our findings, detailed specifications of the system, results obtained and conclusions made.

Projects

Realtime customer Analytics using Face detection and Emotion Analysis, *Client: Happy Space, Joulan Abdul Khalek* 
Feb 2018 – May 2018

A real-time vision-based customer analytics platform deployed on the Raspberry PI for emotion and demographic analysis. Worked with face detection, object tracking and emotion recognition using CNNs and OpenVINO libraries to provide a solution for production deployment. The system was deployed in multiple pilots across Beirut to map happiness.

Education

Department of Data Science and Knowledge Engineering, Maastricht University,
Master of Science in Artificial Intelligence
Sep 2019 – present
Maastricht, Netherlands

Current CGPA: 8.5
(Expected to graduate: July 2021)

- Focused Electives on *Deep Learning, Computer Vision, Computational Statistics* and *Advanced Machine Learning*.
- 6-month Masters Research Projects on,
 - Neural network pruning and growing techniques
 - Pose estimation and gesture identification in real-time video for presentation control.

Manipal Institute of Technology, Manipal University, *Bachelor of Technology in Electronics and Communications*
Jun 2012 – May 2016 | Manipal, India
CGPA: 8.43

Publications

Automated 3D sign language caption generation for video, *Universal Access in the Information Society* 

Jul 2019

Mehta, N., Pai, S. & Singh, S. Automated 3D sign language caption generation for video. Univ Access Inf Soc (2019).

<https://doi.org/10.1007/s10209-019-00668-9>

Skills

Machine Learning/Deep Learning in Python

Pytorch, Tensorflow

Computational Statistics
R

Full Stack Development
Tensorflow.js, Vanilla JS, Flask, Tornado, Django

Deep Learning in Production
Tensorflow Lite, OpenCV, OpenVINO Toolkit, C++

Cloud Compute Services
AWS, GCP, Heroku, Digital Ocean