# Jeet Kanjani

Website LinkedIn Github

jkanjani@andrew.cmu.edu
+44 7448691401/+91 8200281688


## Education

- **Carnegie Mellon University - School of Computer Science** — Pittsburgh, PA
  *Master of Science in Computer Vision (commencing Spring'21, CPT eligible)* — *Jan 2021 - May 2022*
- **The LNM Institute of Information Technology** — Jaipur, India
  *Bachelor of Engineering in Computer Science (7.53/10.0)* — *Jun 2014 – Apr 2018*

## Experience

- **Oxehealth Ltd** — Oxford, UK
  *Research Engineer, Research Intern* — *May 2018 - Present*
  - **Research**: Significantly contributed towards predictive models for Person tracking, Fallen Person Detection, Person on Edge of Bed detection and Sleep Staging from video thereby improving the risk of patient falling from 33% to 48%. [Link]
  - **Development**: Designed and developed C++ based deep learning model serving architecture using GRPC services Switched inference hardware to Coral TPU reducing inference time by 32% and deployment cost by 10X.
  - **Industrialize**: Supervised 3 interns to build active learning annotation tools to reduce time to production. Built an evaluation framework in pyspark for regression testing which is extensively used across teams.
  - **Achievement**: Among 2 out of 45 candidates selected globally for a 6-month research internship programme at Oxehealth Ltd. Offered a full time position based on exceptional performance during the internship.
- **Tonbo Imaging** — Bangalore, India
  *Research Intern* — *Jan 2018 - April 2018*
  - **Research**: Addressed the issue of long term tracking of objects in thermal infrared videos by using fully convolutional siamese networks (SiameseFC) with LSTMs.
  - **Development**: Implemented CUDA version of existing Centroid Object Tracking and Moving Target Indication Algorithms used in the night vision cameras. Achieved speedups of more than 100x over CPU.
- **University of Oxford** — Oxford, UK
  *Research Intern* — *May 2017 - Sept. 2017*
  - **Research**: Worked with a DPhil student at **Torr Vision Group** on 3D Pose Estimation from Monocular images using structured learning approaches. Improved on previously built 2D Pose Estimator using CRF as RNN. [Link]
  - **Development**: Contributed a CUDA implementation of HOG-SVM based Pedestrian Detection to the **OxSight glasses** used by the visually impaired. [Link]
- **Blink Digital** — Mumbai, India
  *Software Development Intern* — *May 2016 - Aug 2016*
  - Developed a Virtual Dressing application using Kinect and Unity3D. Made tracking 1.3X faster by clustering skeletal data.

## Key Projects

- **QuickHOG**: Engineered an end-to-end CUDA object detection pipeline based on HOG-SVM. Got the latency down to 12ms i.e. 80X run time improvement over sequential implementation and 1.2x over state of the art parallel implementation[Link]. Implemented a novel NMS by adopting a *map/reduce* parallelization pattern. [Link]. Deployed to OxSight AR glasses. [Link]
- **Sight, a fifth sense belt for the visually impaired**: Implemented online obstacle detection on Kinect's depth stream to assist the visually impaired. Developed Indian gesture recognition capability on Kinect Pose.
  Won a state level Hackathon(LNMHacks) and conducted product trials at a renowned blind people association. [Link]

## Technical Skills

- **Programming Languages**: : C, **C++**, **Python**, Java (familiar)
- **Tools**: **Tensorflow**, Keras, Caffe, **CUDA**, AWS, **Pyspark**, Flask, **Pandas**, SQL, Unity3D

## Relevant Courses

Computer Vision, CMU*, Math Fundamentals for Robotics, CMU*, Intro to Machine Learning, CMU*, CUDA programming summer course at Oxford, CS231n, Probabilistic Graphical Models by Daphne Koller, deeplearning.ai course by Andrew Ng, Data Structures and Algorithms ***(*-ongoing)***

## Other Achievements

- Stood 2nd among 70+ teams in State level Hackathon held in Rajasthan.
- Stood 2nd at college level in ACM IUPC, an international programming contest organized during LNMIIT's technical fest.