Jeet Kanjani

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EDUCATION

Carnegie Mellon University - School of Computer Science Pittsburgh, PA
Master of Science in Computer Vision (MSCV) *starting 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 python for ML regression testing, model versioning 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**: QuickHOG: Contributed a CUDA implementation of HOG-SVM based Pedestrian Detection to the OxSight glasses used by the visually impaired.
- Engineered an end-to-end detection pipeline on GPU to bring latency down to 12ms with no loss in accuracy i.e. 80X run time improvement over sequential implementation. [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

- **Meta Learning in distinct domains (ongoing)**: Investigating ways to improve meta learning algorithms in a few shot learning setting where source and target domains are distinct. [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]

- **AR Treasure Hunt Android app**: Developed an interactive app on Unity3D using Google's FusedLocationProvider API to fetch user's real time location. Placed virtual treasures across the college campus and conducted an event with 30 participants. [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.