BHARATH RAJ NAGOOR KANI

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Education

SSN COLLEGE OF ENGINEERING
August 2015 - May 2019 (Expected)

- B.E. in Electronics and Communication Engineering

ST. JOHN'S BESANT NAGAR
Graduated May 2015

- Higher secondary score: 96% (480/500)
- School topper in Computer Science and English

Awards

PEOPLE'S CHOICE AWARD
Yet Another Hackathon (SVCE), Aug 2018

RUNNER UP
Data Science Challenge (IIT Madras), April 2018

RUNNER UP
AWS Deep Learning Hackathon (IIT Madras), Jan 2018

FIRST PLACE
Project Display (SSNCE), August 2017

BEST OUTGOING BOY
Higher Secondary School (SJBN), March 2015

Positions of Responsibility

UNDER SECRETARY GENERAL
Head of Logistics, SSN Model United Nations 2018

EVENT HEAD
Organized IBM AI4Good hackathon at SSN Invente 2018

ML DOMAIN HEAD
Conduced Machine Learning classes and events as part of Tech Club SSN

SCHOOL PUPIL LEADER
Served as the head boy in my school (Grade 12)

Skills

FRAMEWORKS
TensorFlow, PyTorch, SciKit, Keras

PROGRAMMING
Python, C++, Matlab, Bash, JavaScript

DEVELOPMENT
AWS, GCP, Git, Django, React, GIMP

RELEVANT COURSEWORK

- *Speech Processing, Image Processing*
- *Embedded and RTOS, Computer Architecture*
- *Coursera: Neural Networks, Machine Learning*
- *MIT OCW: Algorithms, Artificial Intelligence*

Experience

GOOGLE CODE-IN *[https://gci.cloudcv.org]*
Mentor, October 2018 - Present

- Currently serving as a mentor for the project Fabrik, under the CloudCV organization.

ORBUCULUM
Data Science R&D, August 2018 - Present
Data Science Intern, January 2018 - April 2018

- Currently part of the Data Science R&D team at Orbuculum, where we aim to accelerate clinical trials using Machine Learning.
- Worked extensively on the interpretability of neural networks and other machine learning algorithms.

Research

DEHAZING GAN
Single Image Dehazing using a Generative Adversarial Network

- Worked on a method to remove haze using a Conditional GAN
- Perceptual loss and a Tiramisu generator were used.
- Code is available on Github. Preprint is available on Arxiv.

HYPERSPECTRAL IMAGE SEGMENTATION
HSI Segmentation using Depthwise Separable Convolutions

- Worked on segmenting Hyper-Spectral satellite images using a U-Net with Depthwise Separable Convolutions.
- Performance was better than a U-Net with Vanilla Convolutions.
- Code is available on GitHub. Currently working on the paper.

Selected Projects

ASSAULT DETECTION

- Used statistical and Machine Learning methods to detect assault using accelerometer data.
- Project was deployed on a Raspberry Pi.
- Built during Yet Another Hackathon. (People's Choice Award)

PEDESTRIAN DETECTION ON MULTIPLE GPUS

- Created GPU multiprocessing feature for the TensorFlow Object Detection API.
- Compared performance of different Object Detection algorithms.
- Summarized FPS-accuracy trade-off in a medium post. (>3k claps)

FABRIK

- Improved Keras and TensorFlow support for Fabrik.
- Fabrik is an open-source web application to collaboratively build neural networks using a GUI.

CRIMINAL ACTIVITY RECOGNITION

- Currently working on recognizing Criminal Activity using RNNs and Human Pose Estimation as my final year project.

BLOG POSTS AND TUTORIALS

- Author of a technical blog with more than 1000 followers and 30k monthly views.
- Blog primarily consists of technical guides and tutorials based on Machine Learning and Computer Vision concepts.
- Also created Machine Learning tutorials for Tech Club SSN .