Sangeet Kumar Mishra

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Education

Indian Institute of Technology (IIT) Kharagpur, West Bengal, India 2016 – 2020 (Expected)

Undergraduate Major in Civil Engineering

Work Experience

Data Analyst and Visualization Intern Anheuser-Busch InBev May'19 - Jul'19

- Built an automated Data Visualization pipeline from the Data Lake using Python Scripting and SQL Queries
- Brought insights from the employees data and built tool to identify relevant clusters of concern
- Used Machine Learning models like Random Forests to find major drivers for Employee Attrition in the organization

Google Summer of Code 2018 | *Student Developer* | Python Software Foundation Summer '18

- Fixed and improvised the grepping system of Mercurial to add '–all' flag and 'grep' on history as per the Grep Plan
- Wrote properly tested codes using shell-script driven regression tests
- Improved functionality of 'diff' in Mercurial to show colorised in-line diff and better 'diff' output of tests suite results

Google Summer of Code 2019 | *Mentor* Mercurial, Python Software Foundation Summer 2019

- Mentored and helped the students new to Mercurial codebase getting familiar with it.
- Helped them bond with the Mercurial developers community, and resolved their technical and non-technical issues.

Autonomous Underwater Vehicles | *Software Team, ML and Vision* Feb'17 - Mar'18

- Implemented a real time adaptive CA-CIFAR algorithm and HSV Thresholding on bot to detect underwater objects
- Implemented Deep Learning methods for buoy detection using Single Shot Multi Box Detector and Mobile Nets
- Made the inference of models fast and suitable for the bot using Movidius Neural Compute Stick and reduced the cost

Kharagpur Open Source Society | *Advisor and Former Executive Head* Oct'17 - Present

- Contributed to the development of KWoC 2017 Website with more than 2700 registrations KWoC 2017
- Mentored students in Kharagpur Winter of Code 2017 : **Generative Adversarial Networks**
- Successfully conducted the first ever Open Source Summit during Kshitij 2018 and in Kshitij 2019

Skills and Expertise

• **Skills**: Software Development, Data Science/ ML, Leadership, Linux, Docker, Git/ Mercurial, DBMS/ NoSQL
• **Languages**: Python, C, C++, JavaScript
• **Libraries**: TensorFlow, Scikit Learn, PyTorch, Keras, ROS, OpenCV, FastAI, Flask

Publications

Molecule2Vec | Neural Nets based Vector Space Representation of Organic Molecules

- Applied **natural language processing tool** (Doc2Vec) to represent the 3D structure of molecules as vector space models
- Used this model to train a deep network to predict the aqueous solubility of organic molecules

Projects

Semantic Segmentation using Recurrent Convolutional Neural Networks

- Implemented research papers of GAN, DCGAN and GANs for Semantic Segmentation from scratch in Pytorch
- Developed Recurrent Convolutional Networks to perform semantic segmentation of an Image.

VySyBl

- Developed a Blind Assistant System on Xilinx PYNQ Board by building an Image Captioning and TTS pipeline
- Won 1st Prize in Xilinx Innovation Challenge 2019 among 11 different engineering institutes across India in KTJ'19

Other Projects : GitHub

• **Synisto**: A Collaborative Filtering based application to suggest movie to users on MovieLens 1M dataset — GitHub
• **Sign Language Detection**: A Deep Neural Network based program to detect hand signs from 0 to 5 — GitHub
• **K Means Compressor**: KMeans Clustering based compression which achieves a 6 times reduction in size — GitHub