Ashish Kumar Gaurav

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Education

2016 - 2021(July) | **Indian Institute of Technology Kharagpur**
CGPA : 8.58/10 | Integrated Master of Science in **Mathematics and Computing**

Experience

July 2020 – May 2020 | Microsoft, India Development Center | **Software Engineer Internship**

Worked on prediction analysis of Top of rack (ToR) devices, as a part of Azure Networking Team.

- Collected and processed various types of signal data.
- Designed a comparative analytical method for analysing signals in different time ranges.
- Researched and developed a predictive model to predict ToR device reboot before it happens.

Predictive Analysis | Machine Learning | Network Data | Python

March 2020 – October 2019 | Awl, Inc. Japan | **Remote Internship - Part Time**

Awl, Inc is a Japanese company, working on Artificial Intelligence in retail stores.

- Developed a computer vision model for person re-identification.
- Researched and prepared models for age and gender estimation from facial images.
- Successfully ran these models on various edge devices.

Computer Vision | Deep Learning | Caffe | Keras

July 2019 – May 2019 | Awl, Inc. Japan | **Artificial Intelligence Internship**

- Created an algorithm to select images for training using Autoencoders and Clustering, which enhanced the performance of semi-supervised learning.
- Developed an user-interactive visualisation tool for visualising distribution of images using Autoencoders, t-SNE and scatter plot.

Computer Vision | Autoencoder | Data Visualisation | Keras | Matplotlib

August 2018 – May 2018 | Google Summer of Code 2018 | **Student Developer**

As a part of this program, worked on Sympy. Sympy is a python library for symbolic mathematics.

- Improved Sympy by adding new features and fixing bugs.
- Structured and implemented rule based integration in python as a sub-module of Sympy.
- Wrote parsers which automatically generate rules and test-cases in python from mathematica rules.

Python | Mathematica | Parsers | Object Oriented Design

May 2019 – March 2017 | Kharagpur RoboSoccer Students' Group | **Software Team Member**

The aim of this group is to research on autonomous soccer-playing robots and participate in international competitions like Robocup.

- Contributed to the development of software architecture for controlling autonomous bots.
- Implemented variations of RRT (Rapidly-exploring random trees) in path planning.
- Developed an interactive simulator in PyQt with current state of game and various user control.
- Implemented a fuzzy logic based multi agent passing.

Robot Operating System | C++ | Python | Qt

Skills and Interests

Programming Languages	C, C++, Python
Tools and Libraries	Git, OpenCV, Keras, Tensorflow, Caffe, Pandas, Scikit Learn, Qt, Docker
Interests	Data Science, Machine Learning, Software Development, Computer Vision