Sarvagya Gupta

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PROFILE

Sarvagya Gupta is a deep learning engineer at Green Rain Studios, working on artificial intelligence applications for graphics design. He has about 4 years of research experience at India's best universities, Indian Institute of Science and Tata Institute of Fundamental Research in the field of deep learning.

EXPERIENCE

Deep Learning Engineer (Part-time), Green Rain Studios, Mumbai   Jan 2020 - Aug 2021

- As the first Deep Learning engineer at the company, I am responsible for convincing the company about the applications of the field and why it's needed

- My starting works include background estimation and subtraction. This is needed for a lot graphics designing work, specially for movies Currently, it's requires a lot of manual labour using different softwares.

- Currently working on 3D geometry applications like meshes, point clouds and other data for more immersive experience.

Researcher, Tata Institute of Fundamental Research, Mumbai   Aug 2019 - Mar 2020

- TIFR works on a lot of fundamental research in the areas of physics, mathematics, chemistry and other sciences. I joined the university to work on quantum computing and astrophysics research.

- During my time there, I worked on a reinforcement learning code that would generate a quantum gate sequence to make any quantum state reach uniform superposition.

- I was about to start my work in astrophysics but the pandemic had put my work on halt.

Research Assistant, Indian Institute of Science, Bangalore   March 2018 - July 2019

- I worked as a research assistant at Indian Institute of Science. A department has been setup for artificial intelligence research called Robert Bosch Centre for Cyber Physical Systems.

- I worked with Prof Chiranjib Bhattacharyya on self driving car technology for Indian road conditions.

- I was responsible for object detection and collision avoidance research where I worked on a lot of computer vision applications, including collecting, cleaning and annotating data.

- Since this technology was being developed for India, it also had to be low cost and not very resource intensive. So I also worked on network pruning and quantisation so that the deep learning models can work on smaller computing devices. I was able to run the model on NVIDIA TX2 and was planning to get it running on smaller devices like Raspberry Pi and Odroid.

Team Manager, Flock-Mapping the subways   Jan 2015- July 2016
- This was a personal project that I worked on while living in New York City. It was born because of frustration that I faced while travelling in the subway system, where on a usual basis, I would get lost at the stations and don't know from where to exit.

- So I went to every station and collected the car vs exit for every train and every station and created a database that can be used in a mobile app.

- The link to the google play store

EDUCATION
New York University — BSc, Electrical Engineering, 2012-2015

University of Massachusetts, Boston — MS, Computer Science, Fall 2021-Present

SKILLS
With over 4 years ion experience in the field of Machine Learning, I have acquired knowledge and skills in the field of programming and scientific knowledge.

Programming skills include Python, C++ and various deep learning libraries like Keras, Pytorch. Due to recent success of the language, I have also started with deep learning programming with Julia language and libraries like Flux.

A very interesting skill that I have acquired is how to read research papers. Now, I'm able to go through the papers more efficiently and I have implemented some of the papers with more ease.

STRENGHTS

- Being a failure. I believe in taking risks and getting out of my comfort zone. This is why, I have failed a lot in my life, whether academically, socially, start-up wise, you name it. If I see a worthwhile opportunity, I will capitalise on it and this is how I got into machine learning in the first place and have not looked back since.

- Independence. I learn things on my own with little supervision (which is why my research interests include self-supervised and reinforcement learning). I got into machine learning, taught myself music to the extent that I led the school orchestra group.

- I take health (physical and mental) very seriously. I not only ensure I am safe and sound but also people around me. I am lucky to be surrounded by people who also take it very seriously.