SHAURYA GOYAL

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Education

Indian Institute of Technology, Kharagpur   **2020 – Ongoing**
Integrated Master of Science in Economics   *CGPA: 8.74*
Micro - Specialization in Optimization Theory and Applications (Ongoing)

Grade 12 (HSC), score: 92%   **2020**
Grade 10 (ICSE), score: 95%   **2017**

Research Experience

IIT Kharagpur   **July 2021 – Ongoing**
Undergraduate Student Researcher   *Graph Signal Processing*
- Developing faster, more numerically stable and accurate algorithms for graph fourier transform and graph principal component analysis

IIT Kharagpur   **April 2021 – Ongoing**
Undergraduate Student Researcher   *Evolutionary Biology*
- Conducting a phylogenetic analysis of cells using genomic data to understand whether an inisde-out or outside-in model is favourable and to understand how mitchondria originated in eukaryotic cells

Projects

Conditional GANs (Reading Project)   **July - August 2021**
- Did a directed reading on the theory of cGAN models in recent papers with an emphasis on face generation and other imaging purposes. Also looked breifly at dynamical systems ands stochastic approches to GANs

Modelling Global Warming   **June 2021**
- Used regression analysis to model how the temperatures have changed and used it to predict future changes

Robot Simulation   **May 2021**
- Wrote a program that can simulate the movement of a floor cleaning robot in a room with obstacles

News Feed Tracker   **April 2021**
- Wrote a program that monitors and filters online news and displays articles matching the user's interests.

Selected Relevant Coursework

Monte Carlo Methods (PG), Reinforcement Learning (CS 234 Stanford), Linear Programming, ML for Genomics (6.047 MIT OCW), Probability & Statistics, Partial Differential Equations, Psychology

Technical Skills

Programming: Python, MATLAB, C
Other: LaTeX, HTML, CSS, Autocad, MS-Office

Volunteer Work

Teacher(Independent)   **October 2019 – December 2020**
- Taught 2 under privileged kids in my locality of grade 5 (to grade 6) math, science and English.
- Led to improved understanding and skill and their grade also improved by nearly 20 percent.

Leadership / Extracurricular

- Currently involved with co-founding a Neurotech student research group at IIT, Kharagpur
- Active member of Biotechnology Reading group and Debating Society, IIT Kharagpur
- Selected as Times Scholar 2020 by Times of India Group and awarded a scholarship (Declined)
- Silver Medal in National Taekwondo Championship and 1st Dan Black Belt

Other Interests: Guitar, Hiking, Running, Reading, Cooking, Rock music, Star Wars