

Shounak Dey

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EDUCATION

MIT, MANIPAL

B.TECH IN COMPUTER SCIENCE
Minor in Computational Mathematics
Expected July 2020 | Manipal
Cum. GPA: 8.17 / 10.0

FIITJEE

Grad. May 2013 | Visakhapatnam

LINKS

Github:// [dylan007](#)
LinkedIn:// [shounak-dey](#)
Twitter:// [@dey_shounak](#)
Codechef:// [dylandey](#)
Codeforces:// [Shounak](#)
ICPCID:// [Shounak Dey](#)

COURSEWORK

UNDERGRADUATE

Data Structures
Computational Linear Algebra
Design & Analysis of Algorithms
Computational Probability
Parallel Computing
Time Series Analysis
Graph Theory

SKILLS

PROFICIENT:

Java • C/C++ • Python
Algorithms

INTERMEDIATE:

Kubernetes • Springboot • Keras
Tensorflow • Angular • JavaScript
MySQL • Agile • Jira • Dropwizard

FAMILIAR:

Node.js • Express • Kafka

ACHIEVEMENTS

ACM-ICPC KHARAPGPUR, 2018
Ranked 36 in the onsite regionals
ACM-ICPC KOLKATA-KANPUR, 2018
Ranked 46 in the onsite regionals

EXPERIENCE

GOLDMAN SACHS | SDE INTERN

Jan 2020 – June 2020 | Bangalore, Karnataka

- Part of the GS Bank Engineering team under the Corporate Treasury Division
- Worked on systems that implement necessary controls mentioned under Regulation W imposed by the U.S. Federal Reserve System

May 2019 – July 2019 | Bangalore, Karnataka

- Was part of a team under the Human Capital Management Division
- Built a solution for the Goldman Sachs team in the Paris office to automate the process of vacation accrual according to the French holiday laws
- The system used Angular and Java as the main technologies along with a multitude of internal Goldman Sachs developer tools

IIEST | RESEARCH INTERN

May 2018 – July 2018 | Kolkata, West Bengal

- Worked on a Convolutional Neural Network that classifies Scanning Electron Microscope (S.E.M) images of heat treated micro-structures of Martensite upon different heat treatments
- Successfully classified the treatments Inter-critical Annealing, Step Quenching and Intermediate Quenching with an average accuracy of 96.1%

IECSE MANIPAL | TECHNICAL HEAD

April 2018 - August 2019 | Manipal, Karnataka

- Managed all the technical operations of the club, with over 3000 members
- Conducted technical workshops with the aim of promoting technical knowledge and building an atmosphere of curiosity towards programming on campus.
- Also successfully organized the summer and winter projects for juniors in technical domains like Algorithms and Development

PROJECTS

PARALLELIZING A MONTE CARLO RAY TRACER

[View Project](#) | [View Report](#)

- In this project, I worked with Shivika Singh to implement a Ray Tracer for 3D scenes using Monte Carlo Methods with the objective of parallelizing the batch processes of the image pixels using MPI and Cuda libraries of C++.
- We implemented Bounding Volume Hierarchies to optimally calculate the intersection of rays and objects.
- Achieved a speedup of roughly 3x with complex scenes including Perlin spheres and spheres with different materials such as Dielectrics, Metals and Lambertian/Diffuse materials.

GRASSHOPPER OPTIMIZATION FOR FEATURE SELECTION

[View Project](#)

- An ongoing project based on combining a genetic algorithm named Grasshopper Optimization and Evolutionary Population operators like crossover and mutation to optimize Feature Selection.