Dhanus M Lal

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SUMMARY

I am a fourth year UG mathematics major at IISc, Bangalore. I am looking for internships or placements in areals related to mathematics/data science.

EDUCATION

Bachelor of Science (Research) Current CGPA-8.7
Indian Institute of Science, Bengaluru
Major: Mathematics

Higher secondary[ISC] 96%
St. John's Residential School, Kollam, Kerala

High school[CBSE] CGPA-10
City Central School, Kollam, Kerala

SKILLS

Programming Languages & Softwares: C, C++, Python, MATLAB, LaTeX, numpy, scipy, MPI, OpenMP

Operating Systems: Windows, Unix.

Mathematical skills: Very strong mathematical background, Linear Algebra, Measure Theory, Probability Theory, Machine Learing, Sparse Recovery

Other skills: Typing speed: 65 WPM

PROJECTS

Reading project on probability thoery June – August 2019
Advisor: Arvind Ayyer, department of mathematics, IISc, Bangalore

- Explored elementary topics in probability theory.
- Baye's theorem, conditional probabilities, conditional expectation, etc.

Modelling Bernoulli bond percolation in 2-dimensional lattice June – October 2020
With Abhinav M, University of Kerala. Github repository is linked here

- Used C and python to estimate percolation threshold in a 2D lattice

Reading project on Zorn's lemma July – August 2021
Advisor: Arvind Ayyer, department of mathematics, IISc, Bengaluru.

- Explored the equivalence between Zorn's lemma, axiom of choice and well ordering principle.

Developed a simple board game using python May – June 2020
Github repository is linked here.

Thesis project on compressed sensing January – present 2022
Advisor: Manjunath Krishnapur, department of mathematics, IISc, Bengaluru.

- Techniques for recovering sparse signal from a linear measurement.

ACHIEVMENTS

KVPY fellow
Qualified KVPY exam in 2018 with all india rank 61.

Keysight IoT challenge 2019 entry accepted
Distributed Real-Time Air quality Indexing System concept accepted as an entry in the smart land category of Keysight IoT challenge (linked here)

OTHER ACTIVITIES

Volunteered for various events in *Pravega 2018 and 2019* at IISc.

Performed Belousov-Zhabotinsky reaction as an exhibit in the UG chemistry lab during open day IISc, 2020

Represented City Central School in *South Zone Sahodaya sports meet* for the events long jump, 100m sprint and 4×100m relay.