

Dhanus M Lal

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SUMMARY	I am an MSc(Research) mathematics student at IISc, Bangalore. I am looking for internships or placements in areals related to mathematics/data science.	
EDUCATION	<i>Bachelor of Science (Research)</i>	CGPA - 8.8
	Indian Institute of Science, Bengaluru	
	Major: Mathematics	
	<i>Higher secondary</i> [ISC]	96%
	St. John's Residential School, Kollam, Kerala	
	<i>High school</i> [CBSE]	CGPA - 10
SKILLS	City Central School, Kollam, Kerala	
	<i>Programming Languages & Softwares:</i> C, C++, Python, MATLAB, \LaTeX , numpy, scipy, pytorch, MPI, OpenMP	
	<i>Operating Systems:</i> Windows, Linux.	
	<i>Mathematical skills:</i> Very strong mathematical background, Linear Algebra, Measure Theory, Probability Theory, Machine Learning, Sparse Recovery	
PROJECTS	<i>Other skills:</i> Typing speed: 65 WPM	
	<i>Thesis project on compressed sensing</i>	Jan – May 2022
	Advisor: Manjunath Krishnapur, department of mathematics, IISc, Bengaluru.	
	<ul style="list-style-type: none">Techniques for recovering sparse signal from a linear measurement.Explored how geometry of the set of sparse vectors guarantee exact recovery using basis-pursuit.	
	<i>Reading project on Zorn's lemma</i>	Jul – Aug 2021
	Advisor: Arvind Ayer, department of mathematics, IISc, Bengaluru.	
	<ul style="list-style-type: none">Explored the equivalence between Zorn's lemma, axiom of choice and well ordering principle.	
	<i>Modelling Bernoulli bond percolation in 2-dimensional lattice</i>	Jun – Oct 2020
	Github repository is linked here	
	<ul style="list-style-type: none">Used C and python to estimate percolation threshold in a 2D lattice	
	<i>Developed a simple board game using python</i>	May – Jun 2020
	Github repository is linked here.	
	<i>Reading project on probability thoery</i>	Jun – Aug 2019
	Advisor: Arvind Ayer, department of mathematics, IISc, Bangalore	

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

ACHIEVMENTS *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](#))

KVPY fellow

Qualified KVPY exam in 2018 with all india rank 61.

**OTHER
ACTIVITIES**

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

Volunteered for various events in the UG cultural and tech fest *Pravega 2018 and 2019* at IISc.

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