# Sreeramji K S

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## **EDUCATION**

## INDIAN INSTITUTE OF SCIENCE, IISc

PhD, Theory CS Aug 2024 - Present

### AMRITA VISHWA VIDYAPEETHAM

B.TECH IN COMPUTER SCIENCE June 2021 | India First Class with Distinction CGPA: 9.54 / 10

#### SSM SCHOOL

SENIOR SECONDARY May 2017 | Chennai, India Score: 94.20%

## LINKS

Codeforces: jam1729 ☐ Max Rating: 2156 (Yellow) 1000+ problems solved

CodeChef: jam1729 ☐ Max Rating: 2219 (6\*)

Topcoder: jam1729 ♂

ICPC ID: 65GE9IVC8WMJ &

## COURSEWORK

## **POSTGRADUATE**

Design & Analysis of Algorithms Computational Geometry Randomized Algorithms Advanced Data Structures Probability and Statistics

#### UNDERGRADUATE

Theory of Computation
Discrete Mathematics
Neural Networks and Deep Learning

## SKILLS

C++ • Java • Python • Go

Bazel • Prompt Engineering

Lean • LP solvers

Range Query Data Structures

## **INTERESTS**

- Computational Geometry
- Randomized Algorithms
- Heuristics and Optimization

## **EXPERIENCE**

#### **GOOGLE** | SOFTWARE ENGINEER

3 years 1 month, July 2021 - July 2024 | Bengaluru, India

- Google Research Discrete Algorithms (20% time):
  - Worked on coming up with theoretical basis for comparing approaches on the paper "Efficient Location Sampling Algorithms for Road Networks"
- Worked on auto code-generation for fuzz targets using LLMs. Effort to be scaled to 10,000+ OSS packages to increase security coverage.
- Designed and built framework to **semantically validate pre-built packages** utilizing decompiler and disassembler as black boxes. **2** SWE effort saved.

#### MICROSOFT | SOFTWARE ENGINEER INTERN

2 months, May 2020 - July 2020 | Hyderabad, India

- Analysed available World State DB implementations of Hyperledger Fabric, a permissioned distributed blockchain framework, as a part of the Azure Blockchain Services team.
- Built and dockerized a DB adapter that translates 10+ types of queries and parses responses. Brought up an E2E PoC and perf-tested the same.

## RESEARCH

#### SIMPLIFIED VORONOI DIAGRAMS IN 2D | RESEARCH

Dec 2024 - Present | IISc | Computational Geometry

Redefining Voronoi Diagrams to enable simpler construction and possibly simpler manipulation, compared to the standard Fortune's Algorithm.

#### **CLOSEST DOMINANT POINT** | RESEARCH

Sep 2024 – Nov 2024 | IISc | Range Trees, Nearest Neighbour Studied the problem of finding the closest dominant point for each point in a point-set in  $\mathbb{R}^n$ . Proposed an improved algorithm for the offline version.

#### LARGE SCALE FACILITY LOCATION | RESEARCH

April 2020 – June 2021 | UG | Linear Programming, Parallel Heuristics Constrained optimization of a large scale variation of the Facility Location Problem (FLP) for edge-user allocation (EUA). Placed 1st and 4th at national competitions.

## **ACHIEVEMENTS**

2025 2022 2022 2021	Delegate Winner Winner Winner in South Asia	Google Deepmind Research Symposium Simplification Award for project at Google Aarambh Hackathon at Google <b>Optimization Contest</b> at Topcoder Open ( <b>TCO</b> ) (cost minimization for a NP-hard problem on a grid)
2020	1 <sup>st</sup> /30	CodeBuzz Prog. Contest at Techfest, IIT Bombay
2020	83 <sup>rd</sup> /100K+	Global - Google Kickstart Round C
2019	24 <sup>th</sup> and 25 <sup>th</sup>	ICPC Pune Regionals and Kanpur Regionals
2019	1 <sup>st</sup> /50	Zonal CoDecode Contest at Techfest, IIT Bombay
2019	Full Score	CodeChef CCDSAP Advanced Certification

10+ wins at various national level programming contests

## RESPONSIBILITIES

- Contributed with Leadership positions at multiple college clubs ACM | CodeChef Chapter | Code@Amrita | Google DSC
- Authored Competitive Programming problems for multiple national events.
- Event Manager for multiple CS events at college technical fest.