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Sachin Rammoorthy

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EDUCATION

UNIVERSITY OF MICHIGAN
2020-24 | College of Engr. | Ann Arbor, MI
BSE in Computer Science and Mathematics
GPA: 3.981 | Engr. Scholarship of Honor, James B. Angell Scholar, Dean's List

STONEHILL INTERNATIONAL
Valedictorian, IB Diploma Programme
ACT: 36/36 | IB: 43/45

SKILLS

TECHNOLOGY Distributed Systems • Web • Security • Machine Learning • Systems • Architecture • Containers (Docker/K8s) • Cloud • Git

LANGUAGES Python • C++/C • Rust • Android/Java • JavaScript • MATLAB

COURSEWORK OS • ML • Web • Security • Algorithms • Comp. Arch. • Comp. Sci. Theory • Linear Algebra • Financial Math • Vector Calculus • Advanced Probability • Auto. vehicles • Microeconomic Theory

RESEARCH Statistical inference • Regression modeling • Exploratory Data Analysis • Mathematical Demography

AWARDS/HONORS

GRAND PRIZE WINNER, GOOGLE CODE-IN Sep 2018-July 2019
Attended the awards ceremony in Google HQ. Was a mentor to 100+ students in 2019-20.

ENGR SCHOLARSHIP OF HONOR
2020-2024 | University of Michigan
Recipient of a $120,000 merit scholarship over 4 years from the College of Engineering.

INTEL ISEF Dec 2018 | New Delhi
National Finalist - two of my projects were selected among the top 50/10000.

INTL LINGUISTICS OLYMPIAD
May 2018
Shortlisted to the Indian team and attended the training camp in IIIT Hyd.

MISC

- **Michigan Hackers**, senior member
- Reached ~**509k** people on **Stack Overflow**
- US Citizen, Chess player, Pianist, Flautist

EXPERIENCE

DEEPGRAM | Software Engineering Intern
May 2022 - Aug 2022 | San Francisco, CA
Worked on Machine Learning infrastructure for Automated Speech Recognition (ASR) and inference engine optimizations. Additionally, developed and deployed containerized bots for ASR via Zoom and Google Meet. Learnt to work with Rust.

UNIV. OF MICHIGAN SECURITY LAB | R.A.
May 2022 - Present | Ann Arbor, MI
Working with Prof. Alex Halderman, leading a project applying network MiTM attacks and machine learning in election security. Involves reverse engineering and analysing election systems for security vulnerabilities.

UNIV. OF MICHIGAN MATHEMATICS | T.A.
Jan 2022 - Present | Ann Arbor, MI
Teaching Assistant for a rigorous Linear Algebra course (Math 217) at U of M, a gateway class for math majors. Involves tutoring students on subject material (proofs, derivations, and computations) and holding office hours.

GE HEALTHCARE | Edison AI Orchestrator SDE Intern
May 2021 - Aug 2021 | San Francisco Bay Area, CA
Created a containerized library and API to compile and standardise results from hundreds of Artificial Intelligence algorithms run on CT and MRI scans. Learnt to work with Docker, Kubernetes and DICOM. Presented at **CMIMI '21 (SIIM)**.

UNIV. OF MICHIGAN COMPLEX SYSTEMS | R.A.
Sep 2020 - May 2021 | Ann Arbor, MI
Alongside Profs. Mark Newman and Elizabeth Bruch at U of M, built a Markovian model to analyse academic pathways/curricular environments. Worked with large-scale course enrollment data (more than 1 million rows) and interweaved sociology, network theory, mathematics, and computer science.

CISCO (42HERTZ) | Software Engineering Intern
July 2019 - Sep 2019 | Bangalore, India
Spearheaded the development of the analytics dashboard of OneClef, Cisco-42Hertz's flagship music streaming platform. Learnt to work with React and D3.js. Worked closely with the Director of Engineering.

PROJECTS

REDDIT SEARCH ENGINE Sep-Dec 2022 |
Created a custom search engine for infamously hard-to-search Reddit. Scraped thousands of posts for source data, created a PageRank-based reputation ranking system, used Hadoop Streaming to create a segmented inverted index, and created a distributed system for search. In my (unbiased) opinion, results were at least as accurate as Reddit search.

WORDLE BOT Feb-March 2022 |
Created a bot for the popular word game Wordle using Machine Learning. Specifically, we use decision trees and entropy to narrow the "space" of possible guesses every iteration. The bot beats the game 100% of the time!

MARKOV CHAIN BASED CRICKET RATINGS Jun-Sep 2019 |
Developed a rating system for cricket players that is currently in use by a team in the biggest cricket league in the world (IPL). The program calculates ratings by analysing historical data through Markov chains and binomial distributions.