

Alapan Chaudhuri

Undergraduate Research Student, IIITH

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Education

B.Tech. in Computer Science and Engineering

International Institute of Information Technology, Hyderabad

📅 July 2019 – Present

📍 Hyderabad, India

🔗 CGPA: 8.97

Major Projects

Independent Study in Quantum Machine Learning

📅 Oct 2019 – Ongoing

- Motivated towards understanding qubit routing policies and generate tractable RL based compilation routines.
- Studying implementation and compilation using Cirq and Q# (ranked 48 overall in an MS Q# Contest '20).

Games and Computational Complexity

📅 Sep 2020 – Nov 2020

🔗 <https://github.com/banrovegrie/Playing-Games>

- Proved the video game 'CELESTE' is NP-complete.
- Wrote about several formalisms to model games e.g., game theory (proofs on 'NASH' being PPAD-complete) and constraint logic.

Christine

📅 Oct 2020

🔗 <https://github.com/banrovegrie/Christine>

- Discord-bot that moderates sexual harassment along with toxicity and depressive behavior.
- Used 1.6 million tweets for scaling depression from 0 to 4.
- Built using Python, Google Cloud, Javascript.

Dota2-Analyzer

📅 Sep 2020

🔗 <http://github.com/Groverkss/Dota2-Analyzer>

- Analyzer for professional matches in popular game Dota 2.
- Implemented a fully functioning DBMS based on data scraped from OpenDota and built a suitable CLI using Python.

Mariam: a Linux Shell

📅 Aug 2020 – Sep 2020

🔗 <https://github.com/banrovegrie/Mariam>

- Basic shell/terminal implemented from scratch in C.
- Included piping, redirection, signal handling as well as extensive error handling.

Improved xv6

📅 Monsoon 2020

🔗 <https://github.com/banrovegrie/xv6>

- Added new system calls and schedulers (e.g., MLFQ) to the original MIT xv6.

Technical Skills

- Primary: C/C++, Python
- More: x86, Bash, Haskell, Cirq, LaTeX, Q#
- OS: Linux, Windows, macOS
- Web: Javascript, React, Node.js
- Familiar: Java, HTML/CSS, MySQL

Links

🌐 <https://github.com/banrovegrie>

🔗 <https://banrovegrie.github.io>

Some Achievements

Hackathons

📅 2020 – Ongoing

- *First Place Overall* – Kent Hack Enough
- *Best Web Application* – Hack At Home

Competitive Programming

📅 2019 – Ongoing

- Top 6% National at Hash Code, Google
- Rated **1795** on Codeforces ([link](#))
- Highest rating **1898** on Codechef

Olympiads

📅 2018-2019

- Merit Awardee, National Olympiad in Physics (IAPT)
- Perfect score at regionals, Indian Computing Olympiads (IARCS)

Experience

Coordinator

Theory Group, IIITH

📅 Sep 2020 – Ongoing

- Responsible for several initiatives like managing talks by research students and alumni.

Programming Club, IIITH

📅 May 2020 – Ongoing

- Co-created an online platform to promote problem solving during 2020 Pandemic.
- Organized seminars and sessions on algorithms and data structures for the student community.