

# ROHIT ASHIWAL

System Software hobbyist with interests in the field Quantum Computing

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## EDUCATION

Computer Science and Engineering (CSE)

Indian Institute of Technology (IIT), Roorkee

Cumulative GPA: 7.000/10

⌚ July 2017 – Present

## RESEARCH EXPERIENCE

Jülich Supercomputing Centre (JSC), Germany

⌚ Feb 2020 – Present

Remote collaboration with Prof. Dirk Pleiter and Prof. P. Sateesh Kumar

Analysing performance of Asynchronous Many-Task runtime systems on ARM platforms.

- Implementing an optimal 2d stencil application in HPX utilising SIMD instruction set
- Benchmarking the application with Intel SSE/AVX and ARM NEON/SVE with GNU and ARM HPC compiler

## WORK EXPERIENCE

Microsoft Student Partner

Microsoft

⌚ April 2020 – Present

The MSP program is a global group of on-campus ambassadors who are eager to help fellow students, lead in their local tech community, and develop technical and career skills for the future.

- Organised virtual events such as, hackathons, and technology related workshops
- Mobilised fellow MSPs for the smooth running of the program

Student Software Developer

Google Summer of Code 2019 | Git

⌚ May 2019 – Aug 2019

Git is a distributed version control system with focus on speed, data integrity, and support for distributed, non-linear workflows.

- Worked with Git to improve consistency of sequencer commands
- Introduced requested features to git-for-windows

## ACCOMPLISHMENTS

- IBM Quantum Challenge, 2020 - Ranked under 100 among 2000+ participants from all over the world
- ACM ICPC, 2017 - Honorable Mention in ACM ICPC Asia Region Amritapuri Online Contest
- JEE Advanced, 2017 - Top 3% among a pool of 220,000
- JEE Mains, 2017 - Top 0.8% in JEE Mains 2017 among a pool of 1.5 million

## TECHNICAL SKILLS

Programming: Java, Python, Kotlin, JavaScript

System Programming: CUDA C/C++, Go, Rust

Utilities: Git, BigQuery, GDB, make, Doxygen

Others: Shell Scripting, Django, Qiskit, Jupyter, L<sup>A</sup>T<sub>E</sub>X

## PROJECTS

**Ray Tracer:** A highly parallel ray tracing implementation using CUDA C++. Currently, it only implements simple spherical shapes with basic textures (lambertian, metal and glass).

**LBakeDB:** A fully functional Relational DB written in C that follows SQLite like commands.

A course project under Database Management systems

**Assembler:** SIC/XE assembler written in C supporting extended instruction set.

A course project under Systems Software

## EXTRACURRICULAR ACTIVITIES

Mentor, SMP IIT Roorkee

⌚ July 2019 – Present

Mentoring freshmen for smooth transition to campus life, motivating their academic & other endeavors.

Developer at Mobile Development Group

⌚ Jan 2018 – Jul 2019

MDG is a small group of students that foster android development in the campus premises.

Hacker at InfoSec

⌚ Aug 2017 – Jan 2018

InfoSec is a group of students that spread awareness about information and cyber security.

## CERTIFICATES

• IBM Quantum Challenge  
IBM  
Issued on May 2020 see credential

• Specialization: From Data to Insights with GCP  
Coursera  
Issued on Dec 2019 see credential

• Introduction to Quantum Computing  
Saint Petersburg State University  
Issued on Dec 2019 see credential