

Raghav

<https://raghav-bell.github.io>

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Nationality: Indian

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PROFILE

I am an autodidact, Open-source and Inner-source contributor, intrigued in finding answers to how, what and why. Out of curiosity, I have diverse experience in vivid technological domains Quantum Computing, Machine Learning, Internet of Things, Mainframes, High Performance Computing, Register Transfer Logic Design Synthesis, Photonic Integrated Circuits. When my hands are not on keyboard, you can find me collaborating with open-source community, volunteering as a Qiskit Advocate to encourage quantum research in forthcoming generations, reading books, watching movies.

EDUCATION

- **National Institute of Technology(NIT)** Kurukshetra, India
Bachelor of Technology (B.Tech), ECE *Jul, 2019 - Jun, 2023*

EXPERIENCE

- **Application Developer, IBM** *Nov, 2023 - Current*
Projects: Safexpress, Kent RO, Pine Labs, Brigade
Skills: Apex, Flows, LWC, LWR, Apex Web Services, Events.
- **Business Analyst, Udaan.com** *Jan, 2022 - Jul, 2022*
Improvised retention analysing work flow.
Skills: A-B testing, Bayesian Statistics.

PROJECTS

- **graby crate**
A simple implementation of grep in rust and published on crates.io
- **Micro-ElectroMechanical Systems (MEMS) based piezoresistive pressure sensor**
A silicon diaphragm based piezoresistive pressure sensor.
- **Programmable Photonic Integrated Circuits**
Designed 8×8 MZI based triangular multiport interferometer.
- **NASA Space App Challenge 2022**
Analysed the seismic waves on moon data collected during NASA's Apollo missions to classify various moonquakes.
- **Bolt meets Quantum**
Simulated Superdense Coding quantum protocol on Bolt Internet Of Things wi-fi module.

PUBLICATIONS

- **IPCOM000277901D - System and Method for Compiler Design with Neural Symbolic Approach** *Apr, 2026*
Published by The IP.com Journal

AWARDS

- **IBM Defensive Publication Award** May, 2026
Issued by IBM
Contributor to one of the top 10 influential, insightful prior art.
- **Semi-Finalist at Hyundai Social Creator-2021** Mar, 2022
Issued by Hyundai
One of the top 25 ideas among the 530 ideas submitted nationwide.

CERTIFICATIONS

- **IBM Z 101 Certificate** May, 2026
Issued by IBM
- **IBM z/OS Mainframe Practitioner** May, 2026
Issued by IBM
- **Introducing z/OS UNIX System Services** May, 2026
Issued by IBM
- **Introduction to System Programming on IBM Z** Apr, 2026
Issued by IBM
- **Introduction to z/OS Commands and Panels on IBM Z** Mar, 2026
Issued by IBM
- **IBM Z Xplore - Advanced** Mar, 2026
Issued by IBM
- **IBM Z Xplore - Concepts** Mar, 2026
Issued by IBM
- **NASA Open Science Essentials** Mar, 2026
Issued by NASA Open Science
- **Introduction to IBM z/OS** Mar, 2026
Issued by IBM
- **Method Essential** Mar, 2026
Issued by IBM
- **Integrating Quantum and High-Performance Computing** Mar, 2026
Issued by IBM
- **Open Source Foundations** Jan, 2026
Issued by IBM
- **Open Source Contributor** Dec, 2025
Issued by IBM
- **InnerSource Contributor** Oct, 2025
Issued by IBM
- **OIC Initiative Star Contributor** Oct, 2025
Issued by IBM
- **IBM Growth Behaviors** Oct, 2025
Issued by IBM
- **InnerSource Foundations** Oct, 2025
Issued by IBM

- **Think Like a Hacker** *Sep, 2025*
Issued by IBM
- **Financial Markets Industry Jumpstart** *Sep, 2025*
Issued by IBM
- **Qiskit Global Summer School 2025 - Quantum Excellence** *Aug, 2025*
Issued by IBM
- **2025 IBMer watsonx Challenge** *Aug, 2025*
Issued by IBM
- **IBM Technical Specialist - Core Specialty - Foundational** *Jun, 2025*
Issued by IBM
- **Basics of Quantum Information** *Mar, 2025*
Issued by IBM
- **LFS101: Introduction to Linux** *Mar, 2025*
Issued by The Linux Foundation
- **LFS116: PyTorch and Deep Learning for Decision Makers** *Feb, 2025*
Issued by The Linux Foundation
- **LFQ101: Fundamentals of Quantum Computing** *Feb, 2025*
Issued by The Linux Foundation
- **IBM Quantum-Safe Conversations** *Feb, 2025*
Issued by IBM
- **IBM Quantum Conversations** *Feb, 2025*
Issued by IBM
- **Salesforce Certified Platform Developer 1** *Dec, 2024*
Issued by Salesforce
- **Quantum Business Foundations** *Nov, 2024*
Issued by IBM
- **Salesforce Certified Administrator (SCA)** *Nov, 2024*
Issued by Salesforce
- **NASA Open Science** *Sep, 2024*
Issued by NASA - National Aeronautics and Space Administration
- **DIaaS - Aspiring Inventor** *Aug, 2024*
Issued by IBM
- **Salesforce Associate Certification** *Aug, 2024*
Issued by Salesforce
- **Enterprise Design Thinking Practitioner** *Jul, 2024*
Issued by IBM
- **Explore Emerging Tech** *Jul, 2024*
Issued by IBM Skills Build
- **IBM Agile Explorer** *Jul, 2024*
Issued by IBM
- **IBM Consulting Way Habits - Foundational** *Apr, 2024*
Issued by IBM
- **watsonx.data Technical Sales Intermediate** *Mar, 2024*
Issued by IBM

- **Salesforce Certified AI Associate** *Jan, 2024*
Issued by Salesforce
- **Practical Introduction to Quantum-Safe Cryptography** *Dec, 2023*
Issued by IBM
- **Explorations into Mindfulness** *Sep, 2023*
Issued by IBM Skills Build
- **Qiskit Global Summer School 2023 - Quantum Excellence** *Sep, 2023*
Issued by IBM
- **Take your first steps with Rust** *Aug, 2023*
Issued by Microsoft
- **Deep Learning with Tensorflow** *Jun, 2023*
Issued by IBM Skills Build
- **IBM Garage Essential** *Jun, 2023*
Issued by IBM Skills Build
- **Options Trading Strategies In Python: Basic** *Jun, 2023*
Issued by QuantInsti & NSE Academy
- **Penetration Testing and Ethical Hacking** *Mar, 2023*
Issued by Cybrary
- **Cybersecurity Fundamentals Badge** *Mar, 2023*
Issued by IBM Skills Build
- **Galactic Problem Solver** *Oct, 2022*
Issued by NASA Space APP Challenge
- **Qiskit Global Summer School 2022 - Quantum Excellence badge** *Aug, 2022*
Issued by IBM
- **Google IT Automation with Python** *Jul, 2022*
Issued by Coursera & Google
- **VLSI SoC Design using Verilog HDL** *Jun, 2022*
Issued by Maven Silicon
- **Introduction to Fusion Energy and Plasma Physics** *Jun, 2022*
Issued by Princeton Plasma Physics Laboratory Science Education Dept.
- **Google Data Analytics** *Jun, 2022*
Issued by Coursera & Google
- **Internet of Things and Machine Learning** *May, 2022*
Issued by Bolt Iot
- **Goldman Sachs Engineering Virtual Program** *Jul, 2021*
Issued by Goldman Sachs
- **Introduction to Quantum Computing Course** *Oct, 2020 - May, 2021*
Issued by The Coding School (Qubit by Qubit) & IBM
- **Geospatial applications for disaster risk management** *Oct, 2020*
Issued by ISRO, CSSTEAP & UN-SPIDER
- **Python for Data Science badge** *Aug, 2020*
Issued by IBM P-TECH (now, IBM Skills Build)
- **Data Science Foundations - Level 1 badge** *Jul, 2020*
Issued by IBM P-TECH (now, IBM Skills Build)

HACKATHONS

- **Hactoberfest, 2023** Oct, 2023
Organised by DigitalOcean
- **Symposium on Quantum Undergraduate Inquiry & Discovery (SQUID)** Jun, 2023
Organised by group of students at Stanford University & Yale university.
- **Massachusetts Institute of Technology iQuHACK** Jan, 2022
Organised by iQuISE, Massachusetts Institute of Technology.
- **Quantum Coalition Hackathon** Apr, 2021
Organised by group of students at Stanford University & Yale university.
- **Explore Machine Learning** Nov, 2019
Organised by Google AI.
- **Autokriti 11** Sep, 2019
Organised by Society of Automotive Engineers, India.

PRESENTATIONS

- **Qiskit Fall Fest, 2025** Nov, 2025
Organised at BRAC University, Bangladesh, [YouTube](#)
- **Quantum Computing Seminar** Feb, 2023
Organised at NIT, Kurukshetra with Guncha Malik & Ankur Raina
- **Bolt IOT meets Quantum** Jun, 2022
Organised with Bolt, [YouTube](#)

VOLUNTEERING

- **OpenTech Accelerate - Open Source Software Mentor** Feb, 2026
IBM
The OpenTech society is a catalyst for encouraging contribution, collaboration, inclusiveness and making technology more open across IBMers. As a course coordinator, I volunteer to nurture open source culture, collaboration and community.
- **OIC Asset Review Board - Technical Reviewer** Jan, 2026
IBM
The Open Innovation Community (OIC) is a community of IBMers to co-create, co-innovate, co-contribute and collaborate for solving technical problems, producing reusable assets for IBM, Clients and Society. As a technical reviewer, see quality, eligibility, technical feasibility of assets produced from the initiatives.
- **Qiskit Advocate** Aug, 2025
IBM
The Qiskit Advocate Program is a community initiative that empowers individuals to promote quantum computing education, research, and innovation.

KEY SKILLS

- **Programming:** Python3, Bash, SQL, C, Verilog, Rust, Qiskit, LATEX, Salesforce Apex, JCL, RAML
- **Software:** Jupyter notebooks, Iverilog, Git, Nano, Vim, Linux, Salesforce (Sales, Service & Experience Cloud), z/OS, z/OS ISPF, z/OS TSO/E, z/OS Unix System Service, Zowe CLI, Message Passing Interface, Slurm, REST, OData, Open API, RPC, gRPC, Protocol Buffers, XDR, Web-Socket, Streaming, HTTP Long Polling, AsyncAPI, GraphQL

- **Hardware:** Arduino UNO, Bolt IOT wi-fi Module, IBM z/OS Mainframe
- **Technological Domains:** Quantum Computing, Machine Learning, Internet of Things, Penetration Testing, Integrated Photonics, Enterprise Computing

REFERENCES

- **Gourav Saini, gauravsaini@nitkkr.ac.in**
Assistant Professor, Dept. of ECE, NIT Kurukshetra
- **Than Singh Saini, tss@nitkkr.ac.in**
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- **Yashashchandra Dwivedi, yashjidwivedi@nitkkr.ac.in**
Assistant Professor, Dept. of Physics, NIT Kurukshetra