

Pratyush Patel

B.Tech CSE Student — Quantum Computing and AI

Indore, Madhya Pradesh, India

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Portfolio Website — GitHub — LinkedIn

About Me

I am a first year B.Tech Computer Science Engineering student at Prestige Institute Of Engineering Management And Research (PIEMR), Indore.

I am interested in Quantum Computing, Artificial Intelligence, Cybersecurity and Secure Communication Systems.

I have been exploring these areas through projects, research papers and technical learning, and I want to improve my understanding through practical work and research exposure.

Education

Prestige Institute Of Engineering Management And Research (PIEMR) 2025 – Present

B.Tech in Computer Science Engineering

Indore, Madhya Pradesh

Autonomous Institute approved by AICTE & UGC New Delhi, affiliated to RGPV Bhopal.

Research Interests

- Quantum Computing
- Quantum Communication and Quantum Key Distribution
- Artificial Intelligence and Intelligent Systems
- Cybersecurity and Secure Communication Systems
- Post-Quantum Cryptography
- Blockchain Security

Publications

Development of Quantum-Ready Digital Wallet using Blockchain by Integrating Post-Quantum Cryptography

IEEE Conference Publication

DOI: 10.1109/NQComp68334.2026.11497715

A Comparative Study of Quantum Key Distribution and Physical Layer Key Generation for Secure Communication

IEEE Conference Publication

DOI: 10.1109/NQComp68334.2026.11497650

Projects

AI Guided Acoustic Tracking System

- Worked on an AI-guided acoustic tracking and localisation idea using signal processing concepts.

- Explored MFCC-based sound analysis and intelligent tracking approaches.

Quantum Ready Digital Wallet

- Worked on a blockchain-based wallet idea integrated with Post-Quantum Cryptography concepts.
- Explored secure transaction systems for future quantum computing environments.

Quantum Key Distribution Research

- Studied Quantum Key Distribution concepts for secure communication systems.
- Explored Physical Layer Security and quantum communication ideas.

Technical Skills

- Python
- HTML/CSS
- GitHub
- Quantum Computing
- Artificial Intelligence
- Cybersecurity
- Blockchain Security
- Signal Processing

Research Mentorship

Dr. Yogesh Pandya

M.Tech IIT Bombay — PhD IIT Indore

Prestige Institute Of Engineering Management And Research (PIEMR), Indore

Guided in understanding research ideas related to Quantum Computing, Artificial Intelligence and Secure Communication Systems.

Online Profiles

- Portfolio: pratyushpatel816-ai.github.io
- GitHub: github.com/pratyushpatel816-ai
- LinkedIn: linkedin.com/in/pratyush-patel-586056377
- ResearchGate: researchgate.net/profile/Pratyush-Patel-4
- ORCID: orcid.org/0009-0004-0536-1902

Goal

I want to learn more about Quantum Computing, Artificial Intelligence and secure systems through research internships and collaborative work.

I am looking for opportunities where I can improve my understanding, gain practical experience and work with people involved in research and innovation.