Dhanraj Rateria

✉ dhanrajrateria@gmail.com | ✉ 1ms22cy020@msrit.edu | ☎ +91 8234012941 | 📍 Bengaluru, India

○ GitHub | in LinkedIn | </> LeetCode | 🗄 Kaggle | </> CodeForces | 🐦 Twitter | ⚙ Hugging Face | 🌐 Portfolio

Education

- **BE, Computer Science & Engineering (Cyber Security)**, *Ramaiah Institute Of Technology, Bengaluru*   2026
  CGPA or CPI: 9.3/10.0
- **Senior Secondary (XII), Science**, *O.P. Jindal School Patrapali, Raigarh*   2022
  Percentage: 96.00% (CBSE board)
- **Secondary (X)**, *O.P. Jindal School Patrapali, Raigarh*   2020
  Percentage: 98.00% (CBSE board)

Technical Skills

Programming: Python, C, Java, Bash **Operating Systems:** Windows, Linux **ML & Data Processing:** TensorFlow, PyTorch, Scikit-learn, Numpy, Pandas, Seaborn **Web & Mobile:** Flutter, HTML, CSS, ReactJS, NextJS **Backend & DevOps:** Flask, NodeJS, Docker, Kubernetes, Git,CI/CD(Jenkins), Prometheus, Hadoop, Spark **Cloud:** GCP, AWS (EKS, ECS), Azure **Database:** MongoDB, MySQL, Firebase **Quantum Computing:** Qiskit, Quantum Algorithms, Quantum Circuits

Relevant Coursework

Engineering Mathematics, Operating Systems, Data Structures and Algorithms, Database Management Systems, Computer Networks, Computer Architecture, Compiler Design, Automata Theory, UNIX, AWS Fundamentals,Software Engineering, Natural Language Processing, Deep Learning, TensorFlow Development, Machine Learning, Cryptography

Professional Experience

- **Hewlett Packard Enterprise (HPE)**
  - **CPP Research Project Intern**, *Feb, 2025 - Present*
    * Working on developing AI-powered Quantum Resistant Cryptographic Algorithms
    * Aiming to achieve 90% efficiency compared to traditional algorithms
  - **Research Project Intern**, *Feb, 2024 - Oct, 2024*
    * ASTRA SIM Research, optimizing 50+ configuration combinations for 100+ models, reducing overhead by 30%
    * Analyzed performance metrics to enhance distributed training, boosting model convergence speed by 15%
- **Unisys**
  - **Research Project Intern**, *Nov, 2024 - Present*
    * Developed an Intelligent Assistant simplifying the process of generating and modifying product configurations
    * Worked with XML files with over 3000 configurations and attributes, optimizing generation and matching

Leadership & Volunteer Experience

- **IEEE RIT, Bangalore**,
  - Treasurer, IEEE Computer Society (2023 - Present)
  - Execom, IEEE Web Resources (2022 - 2023)
- **Entrepreneurship Development Cell, RIT Bangalore**,
  - IT Head (2024 - Present)
  - Content Writer and Social Media Manager (2023 - 2024)

Major Projects

- **ASTRA-SIM Research Project**, *HPE Industry Collaboration, Report*   Feb, 2024 - Oct, 2024
  - ASTRA SIM Research, optimizing 50+ configuration combinations for 100+ models, reducing overhead by 30%
- **Quantum Federated Learning Simulator**, *GitHub*   Mar, 2025 - May, 2025
  - Achieved a comparative study and 90% efficiency and 50% improvement in precision in the use of a federated quantum learning environment to train ML models.
- **ML Based CAPTCHA: Redifining UIDAI website(SIH, 2024)**, *GitHub*   Aug 2024 - Oct 2024
  - Developed a 95 % accurate CAPTCHA based on user parameters fed into an ML model for GOI (ReactJS, TensorFlow, Selenium)
- **Rahasya: A Dark Pattern Detector Tool(DPBH, 2024)**, *GitHub*   Dec 2023 - Feb 2024
  - Developed an NLP and vision based Dark Patter detector for more than 20 Dark Patterns
- **Logistics Application for Small Businesses(Solve for India, 2023)**, *GitHub*   Jan 2023 - Jun 2023
  - Developed a blockchain based real time logistics management application using Flutter and Solidity

Minor Projects

Monitoring systems and scaling, pipeline and incident management applications, mathematical concepts(Trasformers, NIST papers etc.) implementation from scratch. Quantitative finance concepts and uses. Breaking down computer science concepts(operating systems, technical frameworks and their uses). Frontend and Backend daily web applications. Portfolio for details.

- Technical blogs
- Non-technical blogs

Achievements

- Winner, Smart India Hackathon 2024 (Intra-college)
- Winner, Smart India Hackathon 2023 (Intra-college)
- Winner, Solving for India Hackathon 2023 (Inter-college)
- Regional Round Winner, Dark Pattern Buster Hackathon 2024
- Regional Round Winner, SAP Hackfest 2024
- 2nd runner-up, Leadership Unleashed, TAPMI 2025
- Active contributor on LeetCode and CodeForces, solving complex algorithmic problems