# Rahul Jha

### Education

VIT Bhopal University

Bachelor of Technology in Computer Science

07/2021 - Present Bhopal, India

• Relevant Coursework: Data Structures, Algorithms, Databases, Computer Systems, Web Development

• Cumulative GPA: 8.87/10.0

Chinmaya Vidyalaya 12th Standard 04/2019 - 03/2020Bokaro Steel City, India

• Achieved a Cumulative GPA of 9.28/10.0

Chinmaya Vidyalaya 10th Standard 04/2017 - 03/2018Bokaro Steel City, India

• Achieved a Cumulative GPA of 9.23/10.0

## **Projects**

ChatterBox: Real-time Chat Application

03/2024 - 04/2024

Tech: ReactJS, Next.js, Node.js, Socket.IO, Redis, Kafka

• Engineered a scalable chat platform using ReactJS, Next.js, Node.js, and Socket.IO, supporting 10,000+ simultaneous users

- Integrated Redis and Kafka for robust user authentication, cutting database query time by 60%
- Achieved 99.9% uptime and sub-100ms latency, boosting user engagement metrics by 40%

MediInsight: Medical Report Analysis System

05/2024 - 06/2024

Tech: ReactJS, Next.js, LangChain, Vector Database

- Architected a Retrieval-Augmented Generation (RAG) system utilizing ReactJS, Next.js, and LangChain for medical report analysis
- $\bullet$  Incorporated vector database storage for medical data, slashing query times by 75% and enhancing accuracy by 25%
- Processed 100,000+ medical reports, generating insights with 92% accuracy, validated by healthcare professionals

MotionCrash: Gesture-Controlled Game

07/2024 - 08/2024

Tech: Mediapipe, TensorFlow, OpenCV, Next.js, ReactJS

- Created an innovative endless runner game using Mediapipe, TensorFlow, and OpenCV, attracting 50,000+ players in its first month
- Implemented real-time hand gesture recognition with 98% accuracy, significantly enhancing user experience
- $\bullet$  Optimized performance to reduce input latency by 80%, resulting in a 35% increase in average play session duration

NeuraScan: Brain Tumor Detection AI

09/2024 - 10/2024

Tech: TensorFlow, Keras, Python, Flask, CNN

- Designed a Convolutional Neural Network (CNN) using TensorFlow and Keras, achieving 95% accuracy in brain tumor detection
- $\bullet$  Curated and augmented a dataset of 10,000+ MRI images, improving model robustness and reducing false positives by 30%
- Collaborated with radiologists to refine the model, leading to a 20% improvement in early-stage tumor detection rates

#### High-Performance Web Server and Proxy

01/2024 - 02/2024

Tech: C++, Multithreading, Proxy, Socket, HTTP

- Constructed a multithreaded web server and proxy in C++, capable of managing 10,000 concurrent connections
- $\bullet$  Implemented LRU caching, decreasing latency for repeated requests by 60% and boosting overall throughput by 200%
- Streamlined memory usage, reducing the server's memory footprint by 40% while maintaining high performance

#### Certifications

AWS Certified Cloud Practitioner
Amazon Web Services

05/2024

Online

NPTEL Cloud Computing Indian Institute of Technology Kharagpur 01/2024 - 05/2024

Online

Data Structures and Algorithms with C++iamNeo

02/2024 - 04/2024

Online

#### Technical Skills

- Programming Languages: C++ (Advanced), JavaScript (Advanced), Python (Intermediate), Java (Beginner), SQL (Intermediate)
- Web Technologies: React.js, Node.js, Next.js, HTML5, CSS3, RESTful APIs
- Machine Learning: TensorFlow, Keras, OpenCV, Scikit-learn
- Cloud & DevOps: AWS, Docker, Git, Linux, Google Cloud Platform
- Databases: PostgreSQL, Redis, MongoDB
- Tools: Figma, Postman, Jupyter Notebook, VS Code