

RUDRA CHAUHAN

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EDUCATION

Master of Science, Computer Science

George Mason University, Fairfax, VA

Aug 2023 – May 2025

Bachelor of Engineering, Information Technology

Charotar University of Science and Technology, India

Aug 2019 – May 2023

TECHNICAL SKILLS

Languages/Frameworks: Java, Python, Node.js, Go/Golang, TypeScript, HTML/CSS, JavaScript, React, React Native, Hibernate, Spring/Springboot.

Software Engineering: AWS (API Gateway, SNS, ECS, SQS, Lambda, EC2, RDS, S3, DynamoDB), GCP (GCE, GKE, Cloud Functions, APIs), Git, GitHub, GitLab, DevOps, Distributed Systems, Jenkins, CI/CD, Docker, Kubernetes, Infrastructure as Code (IaC), Terraform, Microservices Architecture, REST APIs, Agile Methodology.

Tools and Technologies: SQL, MySQL, MongoDB, Postgres, Bash Scripting, Linux/Unix, Firebase, AWS Certified Cloud Practitioner.

PROFESSIONAL EXPERIENCE

Application Developer Intern | INTO Mason, Fairfax, VA, USA

Feb 2024 – May 2025

- Designed a full-stack cross-platform mobile app using React Native, TypeScript, and Firebase, launching on iOS and Android and reaching 100+ beta testers with 95% positive usability feedback.
- Engineered Python-based Firebase Cloud Functions for audio analysis, delivering real-time feedback on WPM, filler words, and pauses with 98% processing accuracy and under 2-second latency.
- Integrated Gemini API and Firebase Realtime Database to generate AI-driven speech passages and serve curated video content, increasing feature engagement by 65% during pilot testing.

Software Developer Intern | Crown Software, Gujarat, India

Jan 2023 – May 2023

- Enhanced food, leave, and notification modules in a cross-platform hotel management app used by 5,000+ users, boosting feature usage across iOS and Android platforms, while working with a 16-member cross-functional team.
- Refactored legacy MySQL queries and reduced redundant API calls, boosting API efficiency by 15% and decreasing server load, resulting in optimized cost-performance balance.
- Implemented OTP-based authentication, QR-enabled inventory tracking, and real-time geolocation features; leveraged Firebase and Node.js to support push notifications.

Full Stack Application Developer | Vyanjan, Gujarat, India

Jan 2022 – May 2022

- Architected a full-stack food-ordering app using Flutter for iOS/Android, with backend microservices in Node.js and AWS DynamoDB enabling real-time inventory tracking and seamless ordering.
- Deployed live order tracking using WebSockets and Google Cloud Functions, integrating AWS SQS for async processing and secure payment verification via custom Python scripts.

PROJECTS

EZBuilt | *Node.js, GCP, Firebase, Terraform, Gemini API*

- Prototyped an AI-driven “architecture-as-code” system, integrating LLM-based NLP parsing and with secure IaC practices using Terraform, enabling role-based deployment access and reducing misconfigurations.
- Constructed backend workflows using Node.js, Firebase, and Terraform to automate infrastructure provisioning and configuration, reducing manual setup time by 90% and enhancing scalability and developer experience.
- Configured OAuth2.0 for secure work delegation, enabling users to provision cloud infrastructure directly on their own cloud environments without local setup.

Distributed MapReduce Framework (Go)

- Built a distributed MapReduce system in Go using goroutines and RPC-based task orchestration, enabling parallel processing of large datasets with dynamic task chunking and automatic worker failure recovery.
- Improved throughput through in-memory sorting and partitioned key-value intermediate storage; validated system resiliency via scalability and crash simulations under increasing load.

Student Records Management System | *Python, TensorFlow, Scikit-learn*

- Developed and containerized Java Spring Boot micro-services accessed by RESTful APIs for managing student records in MySQL, integrated with an Angular frontend using microservices architecture.
- Implemented end-to-end UI testing with Selenium WebDriver, ensuring functional reliability across form inputs, validation, and CRUD workflows.

Push2Deploy | *AWS, Jenkins, Docker, Kubernetes, EKS, AWS CloudWatch, CI/CD, AWS EC2*

- Containerized a web application using Docker and hosted it on DockerHub for seamless distribution, automated CI/CD with Jenkins leveraging GitHub webhooks via ngrok for automatic builds, and launched on a scalable Kubernetes cluster across EC2 instances on AWS EKS, configuring real-time monitoring and log-based alerts via Amazon CloudWatch for auto-scaling and failure recovery, enabling automatic rollback on deployment failures, and generating error logs for real-time troubleshooting and rapid failure recovery.

Musically Mine | *Flutter, Dart, MySQL, phpMyAdmin, Python (Machine Learning), Non-relational DB*

- Engineered a three-tier Android and iOS dating application using Flutter for the frontend, launched a dedicated server with MySQL database managed via phpMyAdmin. Created a machine learning-based recommendation algorithm that matches users based on music compatibility, utilizing non-relational database for efficient matching processes.