

Rahul Shamkuwar

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EDUCATION

• University of Colorado Boulder

Bachelor of Science in Computer Science; GPA: 3.94

Boulder, CO

Fall 2022 – Fall 2024

• University of Illinois Urbana-Champaign

Bachelor of Science in Aerospace Engineering; GPA: 3.46

Urbana-Champaign, IL

Fall 2020 – Spring 2022

SKILLS

- **Languages:** Typescript, JavaScript, HCL, HTML, CSS, Python, C/C++, Scala, Dart, C#, Java, SQL, NoSQL.
- **Technologies:** Node.js, Nest.js, React, Next.js, React Native, Flutter, Tailwind, Swagger, Postman, pandas, NumPy, JupyterLab, Scikit-Learn, PyTorch, Optuna, TensorFlow, Keras, Jest.
- **Tools:** AWS, OCI, Terraform, Kubernetes, Docker, GitHub Actions, Git, ESLint, Prisma, Firebase, Jira.
- **Knowledge:** Linux, CI/CD, UI/UX, Cyberbotics: Webots, VMWare, VirtualBox, Data Science, Agile.

EXPERIENCE

• Blueprint

Boulder, CO

Infrastructure Lead and Software Engineer

January 2023 - Present

- **AWS Amplify Deployment:** Spearheaded the deployment of Blueprint's website on AWS Amplify, optimizing its scalability, reliability, and performance, resulting in a robust and highly available web infrastructure.
- **SSL and Domains:** Implemented SSL certificates and configured domain settings, enhancing the website's security and trustworthiness, resulting in improved user confidence and SEO rankings.
- **Gatsby to Next.js Migration:** Led successful migration of a Gatsby.js project to a Next.js framework, improving website performance and scalability while ensuring a seamless user experience.
- **SQL Migration:** Designed, developed, and executed a migration script using MySQL to transition from legacy to a new database schema, demonstrating deep technical expertise and attention to detail.
- **End-to-End Testing:** Managed end-to-end testing and validation of migration process, effectively ensuring data integrity, minimal downtime, and zero data loss during the transition.

• Trimble Cloud

Boulder, CO

Software Engineer

September 2023 - May 2024

- **Dashboard Development:** Led the design and development of a dashboard website for monitoring emission metrics from AWS and Azure services, collaborating closely with a 6-person team.
- **Infrastructure Design and Implementation:** Architected and designed the infrastructure for a full stack application, leveraging AWS services and ensuring a robust, scalable architecture.
- **State Management Setup:** Initiated and managed the remote Terraform state file setup using AWS S3 and DynamoDB.
- **Security and Load Balancing:** Integrated ELB with OpenID for security and efficient load management.
- **Serverless Computing:** Deployed AWS Lambda functions to handle various backend processes, reducing operational costs and improving scalability.
- **Database Management:** Utilized RDS with PostgreSQL for relational database management, ensuring optimal data handling and retrieval.
- **Kubernetes Cluster Setup:** Established a Kubernetes cluster to host both backend and frontend services, enabling seamless communication and integration using namespaces and security groups.
- **Infrastructure as Code:** Employed Terraform to automate the provisioning and management of the entire infrastructure, enhancing repeatability and reducing the risk of manual errors.

• Skillsprint

Boulder, CO

Founding Software Engineer

November 2022 - January 2023

- **Advanced Authentication Development:** Engineered a robust authentication system using JWT tokens and Nest.js route guards, significantly bolstering application security and ensuring secure user access.
- **Technological Integration Mastery:** Successfully integrated and optimized diverse tech stack (Prisma, Swagger, Prettier, PostgreSQL) for efficient backend service.
- **CI/CD:** Implemented GitHub Actions to automate testing and cloud deployment, streamlining the CD pipeline to Vercel for frontend and AWS EC2 for backend services, enhancing development agility and reliability.

PROJECTS

- **HackCU 2024 Winner:** Secured 1st place at the 24-hour HackCU 2024 competition by developing a mobile app using Expo and React Native, designed to incentivize lecture attendance through a fantasy football-style bracket system among friends, awarding points for class participation.
- **HackCU 2023 Runner Up:** Engineered a Chess-Street Fighter-inspired Unity game in just 24 hours, showcasing adaptability and creativity.