# Ashutosh Sharma

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## Experience

**Senior Software Engineer — Ramsey Theory Group** *Sept 2023 - Ongoing*

- Lead development and maintenance of multiple full-stack applications end-to-end using a monorepo structure (Nx) housing Next.js and Django services.
- Plan sprints, prioritize tasks with project managers and stakeholders, ensuring alignment with business goals.
- Provide on-call support for production systems handling over 300k requests per day with over 100k users.
- Resolve incidents using log monitors, PL/SQL debugging while ensuring zero downtime.
- Implement and document architecture and design decisions to support scalability, reusability, and maintainability. Review code, and implement standards.
- Implemented automated testing frameworks (e2e, unit) and optimized backend architecture reducing latency by 30%.
- Manage CI/CD pipelines (Gitlab runners) and orchestrated microservice deployments across AWS and Kubernetes.

**Software Engineer Intern — Yieldmo** *May 2022 - Dec 2022*

- Refactored the legacy QA rig using ReactJS, enabling cross-environment ad testing (GAM, header bidding) and reducing app size by 77%.
- Migrated ad SDKs from legacy APIs to AWS S3, increasing reliability and reducing dependency overhead.
- Developed a Python-based real-time publisher replication tool that reduced ad testing development time by 53%.
- Automated ad generation using schedulers for 100s of mock ads in adaptive ad format Chameleon.

**Full Stack Developer — LeadR** *Jan 2021 - Jun 2021*

- Built a mobile-first lead management system for the real estate sector using React, Django, and microservices.
- Handled over 10,000 daily leads through optimized APIs and scalable backend architecture.
- Led cross-functional teams and optimized system performance overnight to accomodate traffic.

**Front-end Developer — The Fast Way** *Nov 2019 - Nov 2020*

- Developed React, React Native, and Redux-based applications integrating REST APIs for Ruby and Laravel backends.
- Implemented WebRTC-enabled features and UI components from Figma designs.
- Collaborated with senior engineers to plan sprints and design architecture.

## Projects

**Object Detection for Automated Driving using CARLA** *Apr 2023 - May 2023*

- Integrated pre-trained ML models over Open Street Maps into CARLA simulations to test perception and control logic.
- Processed image and point cloud sensor data for collective perception experiments.

**Mason Transport Protocol and DNSSEC Client** *Nov 2022 - Nov 2022*

- Developed a reliable TCP-like transmission protocol with sequenced buffering and retransmission.
- Built a Python client for DNSSEC with cryptographic chain of trust validation and a Spring Boot backend for real-time DNS request visualization.

**Real-Time Traffic Management System** *Jan 2019 - May 2019*

- Engineered an adaptive traffic signal control system using C and BeagleBone Black hardware.
- Integrated real-time sensor inputs to dynamically adjust signal timings based on traffic density.

## Skills

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|---|---|
| Languages | JavaScript, TypeScript, Python, Ruby, C, Bash, Golang, PL/SQL |
| Frameworks and Libraries | React, Redux, Next.js, Django, DRF, Spring Boot |
| Databases and Tools | PostgreSQL, SQL, Docker, Kubernetes, Nx Monorepo |
| Cloud Platforms | AWS, GCP, Azure, GitHub Actions, Jenkins, Gitlab CI/CD, Rancher |
| Collaboration and Automation | JIRA, Git, Actions, Helm |

## Education

- **George Mason University** Fairfax, Virginia
  *Master of Science — Computer Science; GPA: 4.0/4.0*
- **Mumbai University** Mumbai, India
  *Bachelor of Engineering — Computer Science; GPA: 3.89/4.0*

## Academic Awards and Highlights

- Distinguished Academic Achievement Award for outstanding academic performance, George Mason University
- Graduate Teaching Assistant at CSI GMU; member of GMU DSCS, GMUCS, and GMULinux
- District Runners Up — Mumbai University's Innovation Research Convention 2019
- Pub: Data Visualization and Stock Market Prediction, Int. Research Journal of Engg. and Tech., Vol. 06, Sep 2019