

Mrigank Sagar

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Experienced Full-Stack Software Engineer.

Experience

 **Full-stack Software Engineer**
OPTUM (UHG)

2021 - Present

Gurugram, India

- **Role and project:** Key contributor in the development of a comprehensive fitness and health-care platform that integrates gym memberships, vendor shopping, and events. And an *operations and management* platform designed to streamline onboarding and management of insurance clients and partners. Improving project's operations and empowering customer service teams with tools to efficiently resolve members' issues.
- **Backend development:** Engineered resilient microservices with RESTful and GraphQL APIs. Leveraged Scala with Play Framework, Cats-Effects, and Quill to create highly concurrent, and scalable applications. Resulting in quick response times even while sustaining higher loads. Additionally harnessed SpringBoot with Java for building middleware services, and Nest.js to exposing GraphQL APIs to the Frontend application while ensuring minimum overhead and seamless integration across the system.
- **UI and frontend development:** Developed adaptive and responsive frontend Applications with React.js and Next.js, while leveraging Redux for complex state management. Spearheaded the rebranding of the UI to a modern and attractive UI, resulting in a 30% increase in user retention. Implemented server-side rendering with Next.js to improve loading time, early interactivity and search-engine optimisation. Additionally, developed a cross-platform mobile application for the Onepass product using React Native.
- **Engineering support:** Resolved critical bugs related to payment processing and members' eligibility, hence significantly improving reliability of system and contributing to increased customer retention.

Scala Java Spring Play JavaScript TypeScript React.js Next.js React-Native Postgres Docker

Education



B.Tech in Computer Engineering
DELHI TECHNOLOGICAL UNIVERSITY

2017 - 2021

Delhi, India

- CGPA: 8.0
- Relevant Coursework: Data Structures, Algorithms, Object Oriented Programming, Database Management Systems, Operating Systems Design, Computer Networks, Compiler Design, Distributed Systems.
- Lab Internship: Simulated computer networks with Mininet and studied its load with varying network congestion to develop optimised routing tables for Software Defined Networks.
- Major Project: Published a proof of concept to develop softwares using ontologies as a means to document entity relationships and easily document and hence maintain the software system.



12th Grade Senior Secondary, (Science)
RAJKIYA PRATIBHA VIKAS VIDYALAYA (C.B.S.E)

2016-2017

Delhi, India

- Percentage: 92.2 %

Projects

Torrent Downloader

2023 - 2024

DESIGNER/DEVELOPER

- Developed a torrent client as a static site to directly download torrents only using the browser without the need for backend processing, downloaders or additional installations.
- Leveraged the React library and Vite build tool and server to create a seamless application with Webtorrent.js to power the torrent client.
- Utilised ShadCn and Tanstack UI libraries with Tailwind to craft a high performing, responsive and visually appealing user interface.

Publications

Rohit Beniwal, Mrigank Sagar. *Ontology Driven Software Development for Better Understanding and Maintenance of Software System.*
Springer, 2021, pp. 73–81

Awards and Achievements

- Awarded certificate of excellence from Education Minister of India.
- Qualified for JEE mains and JEE advanced, among the top 1% of millions of applicants nationwide, and secured admission eligibility for prestigious Indian Institute of Technology (IITs).
- Awarded medal by Cheif Minister of Delhi for exceptional performance by public school students in JEE exams.

Skills

Programming languages	Scala Java JavaScript TypeScript C++ C Python
Frontend	React.js Next.js React Native Redux HTML/CSS Tailwind
Backend	Play SpringBoot Nest.js PostgreSQL REST APIs GraphQL
Scala tech-stack	Play Cats Cats-Effects Zio Akka actor system Akka / reactive streams Slick Quill
Tools & platforms	Git Docker Kubernetes Linux
Languages	English Hindi