Mrigank Sagar

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Software engineer and a linux enthusiast.

Education

Delhi Technological University   *Delhi, India*
B.TECH IN COMPUTER ENGINEERING   *2017 - 2021*

- **CGPA**: 8.0 out of 10.0.
- **Relevant Coursework**: Distributed systems, Information & network security, Big-data analytics, Compiler design, Theory of computation, Artificial intelligence.
- **Lab Internship**: Simulated computer networks with Mininet to study routing under various topologies and loads and create optimised routing tables for Software Defined Networks(SDN).
- **Bachelor thesis**: Proposed an ontology-driven approach to document software systems, improving maintainability.

Rajkiya Pratibha Vikas Vidyalaya (C.B.S.E)   *Delhi, India*
12TH GRADE SENIOR SECONDARY   *2016-2017*

- Achieved 92.2 percent marks and class rank 3 out of 105.
- Graduated from one of the highly reputed grammar schools in Delhi.
- Awarded by the Chief Minister of Delhi for excellence.

Experience

Optum (UHG)   *Gurugram, India*
FULL-STACK SOFTWARE ENGINEER   *2021 - Present*

- Key contributor to Onepass, a comprehensive fitness care platform offering gym and various membership benefits, and Admin-portal, an internal client onboarding and management platform.
- Leveraged Scala with purely functional libraries such as Cats-effects and Quill to create highly reactive and scalable backend microservices, resulting in 40% less response time under high loads.
- Designed event-driven applications with kafka and postgreSQL to ensure reliable data-flow across microservices.
- Built microservices written in Java with Springboot and Node.js to expose REST and GraphQl APIs ensuring seamless integration with frontend appications.
- Created responsive frontend applications with React.js and Next.js with server side rendering.

Publications

- *Ontology Driven Software Development for better Understanding and Maintenance of Software System*. Proc. ICTSCI 2022, pp. 73–81, Springer, 2022. (Co-authored with Kushal Kumar and Kumar Abhijeet under mentorship of Dr.Rohit Beniwal).

Projects

Designer/Developer
TORRENT DOWNLOADER   *2023 - 2024*

- 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.

Awards and Achievements

- Awarded certificate of excellence for perfect CGPA from the 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 Chief Minister of Delhi for exceptional performance by public school students in JEE exams.
- Awarded scholarship by Delhi government to fully sponsor tuition classes by VMC for JEE preparation.

Activities and Interests

- Volunteered to visit children in orphanages and teach lessons in Science and Maths.
- Volunteered to visit slums and mentored children to build life essential skills and self-confidence while understanding them.
- My hobbies and interests include playing Chess, Guitar, English literature, and listening to Music.

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, German, Sanskrit