

Tarun Singh

[Portfolio - tarunsingh.dev](https://tarunsingh.dev) | contact@tarunsingh.dev | github.com/tarun7singh | linkedin.com/in/tarun7singh

SUMMARY

Results-driven Full-Stack Engineer with a proven track record of building and shipping impactful software products. Passionate about crafting elegant solutions, optimizing performance, and taking ownership of projects from ideation to deployment. Experienced in TypeScript, React, Node.js, cloud technologies (AWS, OCP & GCP), and a microservices architecture, with hands-on experience in developing and researching practical applications for LLMs and Generative AI. Eager to contribute to a fast-paced, product-focused team and build tools that empower developers worldwide. Active open-source contributor and advocate for clean, efficient code.

WORK EXPERIENCE

Senior Software Engineer

Dec 2023 - Present

RBC, Canada

- Led a team developing advisor and client-facing applications for a major wealth management platform, impacting over 50,000 users daily.
- Orchestrated the successful migration of over 30 microservices to the OpenShift Container Platform on OCI, significantly improving scalability and deployment efficiency. This included creating and managing Kubernetes configurations, optimizing resource utilization, and ensuring a smooth transition.
- Architected and implemented automated troubleshooting tools using React and MongoDB, increasing support team efficiency by over 25% and reducing average resolution times by 40%.
- Spearheaded research and development initiatives on using LLMs to enhance the wealth management platform, including generating concise summaries of important docs and developing a proof-of-concept chatbot for advisors to access RBC procedures and client information, improving information accessibility and advisor productivity.
- Technologies - **React, Typescript, Node.JS, GraphQL, AWS, GIT, GitHub, MongoDB, PostgreSQL, OpenShift, Kubernetes, OCI.**

Full Stack Web Developer

Jan 2023 - Aug 2023

SOTI, Canada - Contract

- Collaborated with senior developers to enhance iOS MobiControl products, contributing to key feature design and implementation.
- Investigated and proposed innovative use cases for Generative AI to streamline client onboarding processes, focusing on automating key tasks and improving user experience.
- Developed and integrated a QR code enrollment feature, simplifying the onboarding process for iOS devices and resulting in a 25% increase in successful Apple device enrollments.
- Technologies - **React, JavaScript, Typescript, Node.JS, Apollo GraphQL, AWS, GIT, GitHub, MongoDB and MySQL.**

Full Stack Web Developer

May 2022 - May 2023

Basebuild, California, USA

- Developed and implemented key features for a construction finance management platform using TypeScript, including PDF generation, reusable components, and an enhanced data visualization module for complex hierarchical data.
- Migrated and optimized the backend from JavaScript to TypeScript, resolving critical bugs and improving code maintainability.
- Streamlined the CI/CD pipeline using automation and parallel processing, reducing deployment time from 10 minutes to 2.5 minutes, enabling faster iteration cycles.
- Technologies – **NextJS, React, JavaScript, Typescript, Node.JS, Apollo GraphQL, AWS, GIT, GitHub, MongoDB and MySQL.**

Full Stack Web Developer

Mar 2022 – Aug 2023

Neuravue, Canada

- Developed and enhanced a real-time CCTV analytics platform powered by AI and ML models, focusing on improving performance and user experience.
- Implemented real-time event notifications for the mobile app and web dashboard, providing users with immediate insights into critical events such as weapon detection, threat identification, and fainting incidents.
- Contributed to the core development of the MVP using React, TypeScript, Node.js, and GraphQL.
- Technologies – **React, JavaScript, Typescript, Node.JS, GraphQL, Jetson Nano, MongoDB, AI and ML.**

Full Stack Web Developer

Aug 2020 – Aug 2021

Kisan Network, New Delhi, India

- Significantly improved the performance and scalability of a multi-lingual agricultural marketplace platform by optimizing backend processes.

- Reduced invoice generation and data scraping response times by 2 seconds through decoupling and migrating to serverless functions on AWS, resulting in a 2GB reduction in peak RAM consumption per service.
- Implemented zero-downtime deployments using GitHub Actions and Google App Engine, ensuring high availability and seamless updates.
- Technologies - **React, Redux, Node.JS, GIT, GitHub, GitHub actions, AWS, MongoDB and MySQL.**

Software Engineer

Dec 2018 – Dec 2019

Dockendale Ship Management

- Developed a reporting system to provide daily insights into the performance and status of key operational components, improving decision-making efficiency by 15% for ship management.
- Created a Google Chrome extension to streamline data entry, reducing manual effort by approximately 30% and improving data accuracy.
- Technologies - **HTML, CSS, React, Typescript, GIT, GitHub and MySQL.**

OPEN SOURCE CONTRIBUTIONS

Uptime Kuma - TypeScript, JavaScript, Node.JS, C#, SCSS, HTML

- Status page certificate expiry <https://github.com/louislam/uptime-kuma/pull/3357>
- Added MQTT Monitor type <https://github.com/louislam/uptime-kuma/pull/875>
- Adds ClickSendSMS notification provider <https://github.com/louislam/uptime-kuma/pull/798>
- Added fix to remove children when type changed <https://github.com/louislam/uptime-kuma/pull/3311>

Shields - JavaScript, Node.JS, React, CSS, HTML

- [Netlify] Added changes to use a new colour scheme. <https://github.com/badges/shields/pull/6340>
- [YouTube] Added channel view count and subscriber count badges <https://github.com/badges/shields/pull/6333>

Free Code Camp - TypeScript, JavaScript, CSS, HTML

- Squashed Disable an element using jQuery <https://github.com/freeCodeCamp/freeCodeCamp/pull/16578>
- Changed protocol relative URLs to HTTPS URLs <https://github.com/freeCodeCamp/freeCodeCamp/pull/16573>

EDUCATION

Lambton College | Computer Software and Database Development

GPA: 3.6 Sep 2021 - April 2023

Courses: Python, SQL, .NET, and Java web applications, Data structure and algorithms, and Database Development.

Indian Maritime University | Bachelor of Technology (B.Tech.)

Aug 2014 - May 2018

- Programmed website for the college fest from Scratch, hosted on AWS and handled around 20,000 hits in 1 month.
- Designed and created a web-controlled model of a surveillance boat which used Raspberry pi and custom circuits & coded in python.

TECHNICAL SKILLS

Languages - JavaScript, TypeScript, Express, React, NextJS, Node.JS, Python, Flask, Django, C#, and .NET

API Integration - Slack, Stripe, Discord, Open Weather, Google maps and Twitter

Databases - PostgreSQL, MySQL, MongoDB, Prisma and Mongoose

Tools - Web Scraping, Git, GitHub, GitHub Actions, AWS, Google Cloud, Serverless, Mocha, Jest, Unit testing, kafka

Certifications - Back End Development; APIs and Microservices; JavaScript Algorithms and Data Structures

PERSONAL PROJECTS

Monitoring and Scraping API - github.com/tarun7singh/website-api

- Architected and deployed an advanced Express and Node.JS-based API for monitoring and scraping data from third-party websites, employing the powerful Puppeteer library.
- Successfully implemented robust scraping techniques to parse and extract data from websites, overcoming challenges such as captcha and robot prevention scripts.
- Tools used – **JavaScript, TypeScript, Node.JS, Express, Axios, Puppeteer, GitHub Actions and MongoDB**

Visa Appointment Booking Automation - github.com/tarun7singh/visa-appointment-checker

- Implemented and deployed an automated visa appointment checker leveraging advanced web scraping techniques to extract real-time data from the official US visa appointment website.
- Developed an intelligent booking system that automatically completed the necessary forms, selected optimal time slots, and submitted booking requests, streamlining the appointment booking process for users.
- Tools used – **JavaScript, TypeScript, Node.JS, Express, Axios, Puppeteer and Github Actions**