

# RAMANJEET SINGH

+91-89799 47675 | [raman.s2662@gmail.com](mailto:raman.s2662@gmail.com) | [linkedin.com/in](https://www.linkedin.com/in/ramanjs) | [github.com/ramanjs](https://github.com/ramanjs)

## EDUCATION

**Indraprastha Institute of Information Technology (IIIT), Delhi**  
*Bachelor of Technology in Computer Science and Engineering, CGPA: 8.8*

New Delhi, India  
2021 – 2025

## EXPERIENCE

### Backend Developer Intern

May 2023 – Jul. 2023

*Enveave*

*New Delhi*

- Worked as a backend developer, actively coordinating with the frontend team to address issues, implement new features, and ensure seamless integration.
- Substituted AWS Cloudwatch canaries with a cron job for frontend diagnostics, **saving \$47 (26%) monthly operating expenses**.
- Implemented **real-time autocomplete** functionality using **MongoDB Atlas Search** for efficient user search on the platform.
- Architected and implemented a testing strategy using Jest and Faker, added **65 integration tests** with **code coverage of 73%**.
- Added **continuous integration and deployment workflows** for automating backend testing and deployments using **GitHub Actions** and **AWS Copilot**.
- Utilized **Selenium** to perform **web scraping** of environmental NGOs, extracting data sets to facilitate targeted outreach.

### Freelance Web Developer

Dec. 2022 – Feb. 2023

*StayBook.in*

*Remote*

- Engaged in **regular communication** with the owner of a **small hotel chain** to understand requirements, clarify expectations, and **deliver a booking website**.
- Created API routes to allow booking a hotel room without signup **leading to a \$1200 (32%) increase in monthly revenue**.
- Integrated the **Meta Whatsapp Business API** and **Emailjs** to send booking confirmations and details.
- Implemented a **price planner feature** for the site admin to set prices for different days selectively.

## PROJECTS

### Real Time Global Illumination | C++, OpenGL, GLSL, CMake, Dear ImGui | [Github](#)

Oct. 2023 – Dec. 2023

- Developed a **real-time rendering engine** by adapting the approach from the paper "Interactive Global Illumination Using Voxel Cone Tracing" by Crassin et al.
- Implemented **voxelization** using a regular 3D grid texture to store direct lighting information.
- Employed **cone tracing** techniques to simulate indirect lighting, enhancing the realism of the rendered scenes.

### Syncd | TypeScript, Node.js, Drive API, SQLite | [Github](#)

Apr. 2023 – Jun. 2023

- A CLI tool to **backup local folders to Google Drive**, garnering **over 400 downloads on NPM**.
- Developed a **file-tracking system** with an optimised diffing algorithm to identify and track file modifications.
- Utilized an SQLite database with **transactions and indexes** to enhance performance and ensure persistent storage.
- Implemented a **highly efficient Worker Thread Pool** to compute file **checksums**, resulting in a **50% reduction** in processing time.
- Incorporated **resumable uploads and cron jobs** for scheduled backups.

### Programming Language Interpreter | Go | [Github](#)

May. 2023 – Jul. 2023

- Created a **tree-walking interpreter** for a subset of C programming language.
- Implemented a **lexer, recursive descent parser, and evaluator** entirely from scratch in Go.
- Architected extensive test suites, achieving a code **coverage of 86%**.
- Added support for **higher-order functions, closures and integer arithmetic**.

## TECHNICAL SKILLS

**Languages:** JavaScript, C++, Java, SQL

**Libraries & Frameworks:** React, NextJS, Node.js, OpenGL, LibGDX

**Developer Tools:** Vim, Linux, Git, AWS, CMake

**Relevant Coursework:** Algorithm Design and Analysis, Statistical Machine Learning, Computer Networks, Database Management Systems, Operating Systems, Computer Graphics, Distributed Systems, Theory of Computation