Saurav Singh Chandel

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Education

Bachelor of Science (Honours) in Computer Science & Applied Mathematics — St. John's, NL
Memorial University of Newfoundland — *Sep 2021 – May 2025*
GPA: 3.76 / 4 — Computer Science GPA: 3.9 / 4 — Dean's List 2022–23
Selected coursework: *Data Visualization; Data Structures & Algorithms; Web Development; Video Game Programming & AI Agents; Neural Networks; Calculus I, II & III; Linear Algebra; Numerical Analysis; Ordinary & Partial Differential Equations; Mathematical Modeling; Special & General Relativity*

Technical Skills

Languages: Python, JavaScript, TypeScript, C/C++, Java, SQL
Databases: MongoDB
Frameworks: React, Node.js, Express.js, Next.js
Developer Tools: Linux, Git, Docker, Google Cloud Platform, VS Code, Neovim
Libraries & Technologies: Tailwind CSS, DaisyUI, Inngest, Pandas, NumPy, Matplotlib, scikit-learn, Three.js

Experience

Computer Science Help Centre Assistant | *Memorial University* — Sep 2024 – Dec 2024
- Provided one-on-one and small-group academic support for core computer science courses, helping students debug code and understand algorithms
- Improved student comprehension and confidence by breaking down complex programming concepts into clear, actionable steps

Teaching Assistant | *Memorial University* — Sep 2023 – Dec 2024
- Graded assignments and exams for a 100+ student mathematics course, ensuring consistency, fairness, and timely feedback
- Led weekly tutorial sessions to reinforce lecture material, clarify problem-solving techniques, and address student questions
- Proctored quizzes and final exams while enforcing academic integrity and exam procedures

Database Analyst | *Memorial University* — May 2022 – Aug 2022
- Designed and implemented a Selenium-based automation script to detect and resolve email delivery failures, improving system reliability
- Reduced manual administrative workload by approximately 30 hours per semester by automating processes for the Co-operative Education Services department

Projects

Live Interview Platform | Live Demo | GitHub — Dec 2025
- Built a full-stack MERN application enabling live coding interviews with real-time video and session management
- Implemented backend services for authentication, code execution, and interview state persistence
- **Tools Used:** MongoDB, Express.js, React, Node.js, Tailwind CSS, Stream, Clerk

YouTube Clone | GitHub | Personal Project — Aug 2024
- Designed a cloud-native backend using Google Cloud Run, Pub/Sub, and Storage buckets for scalable media workflows
- **Tools Used:** TypeScript, Next.js, Google Cloud Run, Pub/Sub, Storage buckets, Firebase Functions

Honours Thesis: Black Hole Stability (MOTS) | Thesis — Sep 2024 – Apr 2025
- Developed symbolic and numerical spectral methods to study MOTS stability in black hole spacetimes
- Validated eigenvalue computations against exact solutions, achieving relative errors as low as 10^{-5}
- Analyzed eigenvalue spectrum under parameter variation to identify critical stability transitions