

Nischal Shrestha

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EDUCATION

Carleton University

Ottawa, ON

Computer Science Software Engineering Stream B.C.S. Honours - (CGPA: 10.29/12)

Sep. 2022 – Present

- **Awards:** Carleton University Entrance Scholarship (2022), Lester Bowles Pearson Scholarship (2023), Dean's Honour List (2023, 2024), E.W.R. Steacie Scholarship (2024)

EXPERIENCE

FullStack Developer

Jan 2025 – Present

Interact Health PRO

- **Developing** scalable healthcare applications using **React** and **Node.js**, implementing **RESTful APIs** to optimize data flow between frontend and backend services
- **Building** and maintaining **MySQL** databases while following industry best practices through code reviews and version control with **GitLab**
- Implementing cloud infrastructure by deploying applications on **AWS (EC2, S3)**, to establish scalable and reliable system architecture

Undergraduate Teaching Assistant - Calculus and Linear Algebra

Sept 2023 – Present

Carleton University

Ottawa, ON

- **Improved students' understanding** of complex mathematical concepts, resulting in a **20% increase** in class test scores, by providing clear explanations and tailored **one-on-one support** during office hours
- **Enhanced learning outcomes** for **200+** students by creating **detailed practice problems and leading interactive review sessions**, as measured by **positive student feedback** and higher assignment completion rates.
- **Streamlined the grading process** by reviewing and providing **constructive feedback** on assignments and exams, ensuring a **10% faster turnaround** time while maintaining consistency and fairness.

Private Coding Tutor

Feb. 2021 – Jul. 2022

FreeLance

Ottawa, ON

- Taught **Python** and **Blockly**, designing **personalized lessons** that improved coding proficiency among high school students.

PROJECTS

TrackMyAmazon | *Next.js, TypeScript, Bright Data, MongoDB, Cheerio*

Cron Jobs, Nodemailer, Tailwind CSS, Headless UI

Dec 2023 – Jan, 2024

- Developed an **Amazon product scraping platform** using **Next.js** with **TypeScript** for API routes and **MongoDB** for database storage.
- Implemented **product scraping features** using **Bright Data** and **Cheerio** to parse pricing, availability, and product details.
- Automated data updates with **cron jobs** to ensure real-time scraping and notifications.
- Integrated **Nodemailer** to send email alerts for price drops and stock updates
- Designed a responsive **frontend** with **Tailwind CSS** and **Headless UI** for a seamless user experience

AlgoVis | *C++, SFML*

May 2023 – Nov 2023

- Developed a **visualization tool for algorithms** showcasing sorting algorithms (**Insertion Sort, Shell Sort, Gnome Sort**) and pathfinding techniques (**BFS Pathfinder, Flood Fill**).
- Implemented **interactive features** such as custom-sized arrays, speed adjustment, pause, and resume for enhanced usability.
- Optimized **real-time performance** to address UI lag and memory usage issues with large data structures.

TECHNICAL SKILLS

Languages and Frameworks: Java, Python, C/C++, SQL (Postgres), JavaScript, TypeScript, HTML/CSS

Libraries and Tools: React, SFML, Nodemailer, Pandas, NumPy, Matplotlib, Git, Docker, TravisCI

IDEs and Platforms: Linux(Bash Scripting), VS Code, Visual Studio, IntelliJ, GitHub, Postman