Toushal Sewruttun

Fredericton, New Brunswick (Open to relocation)

Email: tsewrutt@unb.ca | **LinkedIn**: linkedin.com/in/toushal-sewruttun | **Phone**: (506) 429-4292 | https://tsewrutt.com/

I am a bilingual tech professional with experience building systems from the ground up, and a strong focus with research, and practical problem-solving. I am enthusiastic about connecting and fostering relationships with others, with a passion for communication and organization. You can learn more about my personal projects on my website.

Relevant Skills

- **Programming & Scripting:** Python, C++, C, React, Java, Python, Kotlin, TypeScript, C#, SQL
- **Systems & Network:** Windows, MacOS, Linux**,** A/B Testing, Vercel, Cloudflare, CI/CD, REST API, Wireshark
- **Communication:** Fluent in writing and speaking in English, French, and Creole; basic communication skills in German.
- **Soft Skills:** Technical leadership, Project Management, Mentorship, Agile Environment

Work Experience

Research Lead Developer – HCI Lab at UNB *(Full-time, 04/2024 – 05/2025)*   **Fredericton, NB**

- Designed and implemented back-end architecture to support markerless tracking and perform complex calculations for real-world position estimation.
- Led the deployment, troubleshooting of audio-visual systems and evaluated system architecture performance based on motion tracking results. Gained extensive hands-on experience with Bash, Unity, Python and MR devices.
- Developed a robust communication layer between the Unity client and the model server for continuous data streaming.
- Authored documentation for the deployed system to support knowledge transfer of back-end algorithms, including model API and functionalities.

Research Associate – HCI Lab at UNB *(Full-time, 05/2023 – 04/2024)*   **Fredericton, NB**

- Developed and tested an end-to-end IoT robotics system using Raspberry Pi and a custom controller application, integrated with Google Firebase for real-time data logging and streaming.
- Conducted qualitative data analysis from user studies and interpreted findings to refine experiment design.
- Performed statistical analysis (e.g., ANOVA) on participant data from human-robot interaction experiments, supporting research conclusions with quantitative evidence.
- Co-authored and published a peer-reviewed IEEE paper on a human robot interaction system, contributing to the analytical findings and writing components.

Summer Monitor – UNB Conference Services *(Full-time, Summer 2019 – 2022)*   **Fredericton, NB**

- Resolved complaints and technical issues (e.g., Wi-Fi connectivity, access control systems, AV equipment), ensuring a smooth and positive guest experience through effective problem-solving and communication.
- Built strong relationships with residents, conference guests, and community members by providing support.
- Recruited, trained, and supervised a team of student employees, ensuring daily operations ran smoothly.

Volunteer Experience

Technical support assistant - Perunovic Lab in the UNB Department of Psychology (01/2025 – Present)

- Help students' projects with Qualtrics, an online survey platform, and resolve html issues with survey.
- Aid students with technical and design aspects of their projects. (e.g. Windows, projectors, Microsoft Excel, Canva, Photoshop)

Translator/ Web developer – We're Here For You Canada (04/2025 – Present)

- Manage website deployments, version control, and updates using Git and CI/CD pipelines.
- Translating pre-existing website materials and social media posts into French.

Grants & Certifications

- Bachelor of Computer Science (**2023**)   **University of New Brunswick**
- ITIL 4 Foundation Certificate (**in progress**)   **Axelos**
- Diplôme d'études en langue français (**DELF B2**) (**2017**)   **Alliance Française**
- Mitacs Grant for AI Markerless Motion Tracking (**2024**)   **University of New Brunswick**
- New Brunswick Driver's License (**Class 5**)   **Province of New Brunswick**