SOUTHIDEJ **OUDANONH**

southidej@gmail.com | 514-717-7093 | LinkedIn | Portfolio

Education

Université de Montréal Sept 2020 - Dec 2023
Bachelor of Computer Science

• **Courses:** Software Engineering, Web Development, Databases, OOP, Algorithms, Data Structures Machine Learning, Data Science, Cybersecurity, Operating Systems, Calculus

Skills

Languages:	Python, TypeScript, JavaScript, Java, PHP, C++, C#
Frameworks | DBs:	FastAPI, React, Tailwind CSS, MongoDB, PostgreSQL
Technologies:	Bash, Git, Unix, VS Code, Docker, Render

Projects

Café sans-fil | FastAPI, React, MongoDB, Tailwind CSS, Render Sept 2023 – Present
GitHub Website

• Designed and implemented a NoSQL DB tailored for order and management of UdeM student cafés.
• Developed a REST API, enabling reliable and fast data transactions between server and web application.
• Developed a sales reporting feature to analyze and highlight top-selling and least-selling items.
• Implemented user authentication and security protocols, ensuring data integrity and application safety.
• Implemented comprehensive testing using Pytest, covering 82 scenarios to ensure API robustness.
• Ensured test coverage with script-generated realistic data, reflecting a variety of user scenarios.
• Assisted in frontend development, enhancing UI/UX with React and Tailwind CSS for responsive design.
• Collaborated in a two-person team, focusing on backend development with a counterpart handling frontend, under agile supervision.

BlitzPad | Arduino, Circuitry, Woodworking, Soldering, Painting June 2023 – Present
• Engineered a DDR pad using Arduino, integrating custom circuitry for interactive gameplay.
• Designed and constructed the pad with woodworking techniques for durability and usability.
• Coded the Arduino to accurately detect steps and enhance the interactive experience of the DDR pad.
• Advanced to Phase 3 of 'Ton projet, ta carrière' by CDEC Montréal-Nord, a stage reserved for promising projects, receiving specialized support and resources for further development.

Raytracer | C++, CMake October 2022
• Built a custom ray tracing engine from scratch in C++ for realistic rendering of 3D Blender models.
• Applied AABB and BVH algorithms to optimize speed and efficiency of rendering complex 3D scenes.
• Enhanced visual realism through shading techniques, including local lighting, shadowing effects, and texture mapping, for detailed and lifelike images.

Koe | Python Mar 2023
• Developed a versatile Text-to-Speech, capable of processing selectable text in any application.
• Integrated multi-language support, enabling on-the-fly detection and vocalization.
• Implemented customizable speech settings, allowing users to select voice type and speed.