

# SOUTHIDEJ OUDANONH

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## Education

**Université de Montréal**

Sept 2020 - Dec 2023

**Bachelor of Computer Science**

- **Courses:** Software Engineering, Web Development, UI/UX Design, Databases, OOP, Algorithms, Data Structures, Machine Learning, Data Science, Cybersecurity, OS, Calculus

## Skills

Languages: Python, HTML5, CSS, TypeScript, JavaScript, Java, PHP, jQuery, C++, C#  
Frameworks | DBs: FastAPI, React, Tailwind CSS, MongoDB, PostgreSQL, MySQL  
Technologies: Bash, Git, Unix, VS Code, Docker, Render

## Projects

**Café sans-fil** | FastAPI, React, MongoDB, Tailwind CSS, Render, CI/CD

Sept 2023 – Present

[GitHub](#) [Website](#)

- Conducted detailed analysis of user needs and technical specifications for project requirements
- 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.

**Microbrewery** | HTML5, CSS, JS, Bootstrap, jQuery, PHP, AJAX, MySQL

April 2022

- Developed a PHP-based REST API for streamlined data communication.
- Implemented efficient data handling and interaction through PHP and AJAX.
- Implemented an encrypted login feature and set up different user access levels.

**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.

**BlitzPad** | Arduino, Circuitry, Woodworking, Soldering

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.