

# ANTOINE PHAN

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## WORK EXPERIENCE

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### Software Developer (Part-time)

Dec 2023 – Current

Remote - Centre for the Study of the Sociology and Aesthetics of Music (CESEM) at NOVA University Lisbon

- Developing algorithms and web interface to search and analyse similarities in Western Early Music chants.
- Working on the ECHOES project (Echoes from the Past: Unveiling a Lost Soundscape).

### Software Developer & Audio Designer

May 2023 – Sep 2023

Montréal, Québec, Canada - Shared Reality Lab at McGill University

- Implemented and integrated a translation microservice using large language models to the system's backend.
- Translated user interface of the web extension to French.
- Designed earcons (audio cues) for user interactions.
- Tech stack: Python, Flask/Gunicorn; TypeScript, expressJS; Docker and Docker Compose.
- Contributed to the IMAGE project (Internet Multimodal Access to Graphical Exploration).

## PROJECTS

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### Homelab | Personal Cloud Server

- Configure a server as cloud drive, using a Raspberry Pi, Nginx, and OpenSSH for remote access.
- Manage firewall rules and inbound-outbound network traffics.
- Maintain webserver for databases, full-stack applications, online game server, etc.

### IEEE McGill Website - [ieeemcgill.com](https://ieeemcgill.com)

May 2023 – Current

- Design a responsive website using SvelteKit framework, TailwindCSS, Flowbite.

### Hotel Management System (ECSE 321 – Intro. to Software Engineering)

Sep 2023 – Dec 2023

- Developed a full-stack hotel management system with PostgreSQL as database, SpringBoot and Gradle for backend; VueJS and TailwindCSS for the frontend.
- Worked as the Architecture Lead and Code Reviewer in a team of 6 students.

### Waddl-E (ECSE 211 – Design Principles and Methods)

Jan 2023 – Apr 2023

- Engineered an autonomous delivery robot using Python, Raspberry Pi, and Lego® Mindstorm®.
- Worked as the Software Lead in a team of 6.

### Portfolio website

- Designed a portfolio site with ReactJS and SASS.

## EDUCATION

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### McGill University – Bachelor of Engineering

Sep 2021 – Current

- Major in Electrical Engineering
- Minors in Software Engineering and Musical Science & Technology (MST)
- CGPA: 3.41/4.00

## SKILLS

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- **Languages:** English (Fluent), French (Conversational), Vietnamese (Native), Spanish (Basic).
- **Programming:** C, C++, Python, Java, TypeScript, JavaScript, Assembly (ARM).
- **Hardware:** Electrical components, breadboard circuit, integrated circuit (IC), multimeter, oscilloscope, and power/function generators; FPGA (DE1-SoC) and VHDL; Raspberry Pi GPIO and Arduino.
- **Software:** GNU/Linux (Arch, Debian), bash, ssh, git, GitHub, Docker, Gradle, PostgreSQL, Nginx, AWS EC2.
- **Frameworks:** SvelteKit framework, expressJS, Flask/Gunicorn, Spring Boot.
- **Methodologies:** Agile/Scrum and Waterfall for project management, BDD, TDD, CI/CD with GitHub Actions.
- **Media production tools:** Office Suite; Adobe Illustrator & Lightroom; MuseScore, SuperCollider, LMMS.