

# Marc-André Bélanger

## GENERAL INFORMATION

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**Email** marc-andre.belanger@umontreal.ca  
**Languages** English, French  
**GitHub** <https://github.com/belmarca>

## EDUCATION

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**2010-2013** **B.Sc. in Chemistry**, Université de Montréal  
**2022-2025** **M.Sc. in Computer Science**, Université de Montréal

## RELEVANT EXPERIENCE

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**2024** **LLM Optimization Lead - Early stage startup**  
Worked as a contractor on an LLM optimization and evaluation pipeline. Full-stack involvement from cutting-edge prompt engineering to computation graph optimizations to JITing prompt optimizers using meta-prompting techniques.

**2022-2025** **Freelancer**  
I have worked on various contracts for clients including web scraping, API reverse-engineering, data collection, analysis and sanitization, full stack web-app development, consulting, prototyping, etc.

**2014 - 2023** **Software developer and consultant - Medical imaging center**  
Built business-critical internal and customer-facing full-stack web apps for cloud and on-premise deployments. Acted as a consultant for stakeholders and decision-makers for procurement, strategy and litigation.

**2023 - 2024** **Lecturer - Université de Montréal**  
I taught two introductory programming courses to hundreds of students. The course uses Python and the codeBoot environment, which I help build and maintain.

**2016** **Technical support specialist/Software developer - La Presse, Montréal**  
Built an Apple device monitoring system on top of Apple Profile Manager and accompanying PowerBI dashboards for stakeholders including management and tech support. General IT support for a large electronic newspaper.  
Worked with: shell scripting, Python, Vagrant, PostgreSQL, PowerBI.

**2013-2015** **Teaching Assistant - Université de Montréal**  
I was a teaching assistant for multiple undergraduate chemistry courses.

## PUBLICATIONS

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Bélanger, M.A., Feeley, M., 2021a. A lightweight approach for accessing Python modules from Gambit Scheme (Lightning Talk), in: Scheme and Functional Programming Workshop (SFPW'21), Online, Everywhere. URL: <https://icfp21.sigplan.org/details/scheme-2021-papers/9/A-lightweight-approach-for-accessing-Python-modules-from-Gambit-Scheme-Lightning-Tal>.

Bélanger, M.A., Feeley, M., 2021b. A Scheme Foreign Function Interface to JavaScript Based on an

- Infix Extension, in: Proceedings of the 14th European Lisp Symposium, Online, Everywhere. URL: <https://doi.org/10.5281/zenodo.4711425>, doi:10.5281/zenodo.4711425.
- Bélanger, M.A., Feeley, M., 2022. A Foreign Function Interface between Gambit Scheme and CPython, in: Scheme and Functional Programming Workshop (SFPW'22). Preprint at <https://andykeep.com/SchemeWorkshop2022/scheme2022-final22.pdf>.
- Bélanger, M.A., Feeley, M., 2023. Interfacing with CPython from Gambit Scheme, in: 1st Languages, Architectures, and Tools for Heterogeneous Computing (LATHC) Workshop 2023. URL: <https://jnamaral.github.io/LATHC/program/#INTERFACING>.
- Ernzerhof, M., Bélanger, M.A., Mayou, D., Nemati Aram, T., 2016. Simple model of a coherent molecular photocell. The Journal of Chemical Physics 144, 134102. URL: <https://doi.org/10.1063/1.4944468>, doi:10.1063/1.4944468.