Resume
Frederic Boileau
frederic.boileau@fredericboileau.org
(514) 292–4331

Education

- UdeM Msc Computer Science (AI and Optimization, at thesis writing phase, on hiatus)
  2018-...

- Mcgill Bsc Mathematics and Computer Science
  2012–2018

- Polytechnique BEng Electrical Engineering (2 years, not completed, GPA: 3.4/4)
  2015–2017

Work Experience

- ADOPT/IBS: Senior Product Engineer
  May 2021 (current occupation)

  - Reponsible for backend of next iteration of flagship product including design (within inherited previous work)
  - Technologies: helm/k8s/podman, postgresql, rabbitmq, keycloak, python/aiohttp/pytest, perl, bash, scheme(R5RS)
  - Design, implementation, deployment (k8s) and operations (in dev environement) of the following:
    · Asynchronous worker model for long running processes and streaming notifications, with rabbimq
    · Authorization workflow and user management model, database migrations, with keycloak, postgres and liquibase
    · Centralized aggregated logging with syslog-ng+fluentd+loki
  - Rework of frontend, reactjs
    · adapt interfaces
    · upgrade to more modern js/react fixing deprecrated dependencies
    · adding POC for various backend features (async state synchronization with SSE+redux, user management)

- GIRO: C++ developer for transport scheduling module team
  2017 (7 months)

  - Develop new features for transport visualization
  - Update codebase to new standards (e.g. C++14 and STL)
  - Implement database migration tool (essentially symmetric serializers and deserializers)
  - Maintain legacy C++98

- Ubisoft: data science intern for the User Research Lab
  2016 (5 months)

  - Write SQL (HiveQL) queries to present quantitative data to developer team

  - Produce dashboards for the developer teams and management teams

  - Address efficiency issues in big data environment (order of petabytes)

  - Maintain the ETL pipeline (airflow), which includes monitoring the temporary tables in the associated directed acyclic graph and debugging failed queries.

- Resarch Institute McGill University Health Center: research assistant
  2015 (1.5 year, part-time)

  - Implement statistical analysis tools relevant to given data in R

  - Implement tool for automated periodic reporting of key metrics

  - Evaluate and recommend modifications concerning the data logging interface for clinicians and its impact on data analysis quality

- Santropol Roulant: bike coop program manager
  2014 (4 months internship)

  - Migrate ad-hoc sales system to point of sale system (POS) and computerized inventory management

  - Organize workshops in bike repair

  - Repair and maintain coop's bike fleet

  - Schedule and manage monthly meetings of the volunteer team

Tools/skills

- Industry experience in the following languages: python, C++, C, scheme (R5RS), bash, perl

- Hobby experience in Ocaml, Common Lisp and Emacs Lisp (now trying nim)

- Advanced Linux user, sysadmin skills. Experience working with Debian, REHL, and Arch based distributions.

- Working knowledge of C for embedded systems; projects pursued while an Electrical Engineering student. Includes participating in the Poly eRacing project as a member of the team focused on the battery management board (also involved PCB development.)

- Strong knowledge of mathematical foundations of numerical optimization

- Clarity, conciseness and correctness minded, conditionned through a strong pure mathematics education

- Mother tongue level in French and English, intermediate Portuguese reading.

Misc/interests

- Writer of short stories and poetry in both English and French

- Interest in theory of literature (stylistics, hermeneutics, prosody)

Self-motivated learner in various topics like modern OS developments, distributed data challenges, compiler technologies, languages with different paradigms; lisps, FP (ML family), concurrency focused ones (Go, Erlang), logic programming (Prolog,minikanren)