Lance **Lafontaine**
Software Engineering Student

CO-OP · Université Concordia · INSTITUTE FOR CO-OPERATIVE EDUCATION

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Skills & Technologies

Javascript	Python	Linux & DevOps	C++	Other
ES6, Babel, Electron	Django, Flask, SQLAlchemy	Unix tools & architecture	OpenGL, SFML	Java, Scala, LaTeX
Node.js, Express	requests, pytest, argparse	build & deploy scripts	Boost libraries	Rust, SQL, redis
React, Redux, AngularJS	generators and corountines	AWS, Docker, DigitalOcean	CppUnit	TDD approach
Webpack, Gulp, Rollup	itertools, asyncio	Heroku, Atlassian	gcc, gdb	Design patterns
Protractor, Jasmine	scripting & tooling	GitLab, SonarQube	clang, LLVM	Agile lifecycle

Education

B.Eng. in Software Engineering
Concordia University

Montreal, Quebec, Canada
Sept. 2014 - May 2018

- Member of the Institute for Co-operative Education
- Relevant coursework:
  - *Software Engineering*: Software Architecture and Design I & II, Web Programming, Software Process, Software Testing & QA
  - *Computer Science*: Data Structures & Algorithms, Advanced Program Design in C++, Computer Graphics, Databases
  - *Mathematics*: Discrete Mathematics, Advanced Calculus, Numerical Methods, Probability & Statistics
- Cumulative Grade Point Average: 3.36/4.3

B.Sc. Honours in Cell and Molecular Biology
Concordia University

Montreal, Quebec, Canada
Sept. 2011 - May 2014

- Relevant Coursework: Bioinformatics, Molecular Modeling with Python
- Cumulative Grade Point Average: 3.91/4.3

DEC. Sciences
John Abbott College

Montreal, Quebec, Canada
Sept. 2009 - May 2011

Work Experience

AppHelp by AppDirect
Web Application Developer

Montreal, Quebec, Canada
Sept. 2015 - Apr. 2017

- Developed web applications with technologies like Javascript, React, Redux, AngularJS, Node.js, Python, Scala, C++ and more.
- Consistently applied a test-driven development (TDD) and agile approach in order to maintain complex software systems.
- Successfully led the development and delivery of user-facing projects with changing requirements and shifting deadlines.
- Took part in the organization's processes, code reviews, project demos, lunch & learns, hackathons and more.

Concordia University
Web Developer and Team Advisor

Montreal, Quebec, Canada
May 2014 - Oct. 2014

- Designed and developed a team project wiki with technologies like Javascript, jQuery, CSS and MediaWiki.
- Excelled in a leadership role as a part of the Science and Engineering team.
- Received a silver medal at the International Genetically Engineered Machine competition our research in biotechnology.

Concordia University
Scientific Researcher

Montreal, Quebec, Canada
Sept. 2013 - May 2014

- Applied practical bioinformatic processes such as multiple alignment of DNA sequences and 2D/3D folding and modeling of RNA.
- Received a perfect grade for my undergraduate thesis "Computational Design and Experimental Testing of Biological Logic Gates with Synthetic Ribozymes".

Staples Canada
Technology Specialist and Sales Associate

Westmount, Quebec, Canada
Oct. 2012 - Nov. 2015

- Was responsible for the installation and configuration of commercial software on PC and mobile devices.
- Received the Inspired Technology Associate award in October 2013 and April 2015 for providing ideal solutions to clients.

Projects & Open-Source Contributions

StackFeed
Python terminal application
HTTPS://GITHUB.COM/LANCELAFONTAINE/STACKFEED
Dec. 2016 - present
- A command-line tool written in Python for listing StackOverflow questions in real-time based on tags.
- Developed with a test-driven development (TDD) approach for maintainability and open-source contributions.
- Extensively unit tested and deployed using continuous integration with QuantifiedCode and TravisCI.

Dungeons & Dragons Simulator
C++ Graphical Game
HTTPS://GITHUB.COM/LANCELAFONTAINE/DUNGEONS-AND-DRAGONS
Sept. 2016 - Dec. 2016
- Created a graphical video game based on complex stakeholder requirements.
- Developed the application in modern C++ using technologies and libraries like SFML, CppUnit, and Doxygen.
- Used design patterns when appropriate such as observer, MVC, factory, strategy, decorator and more.

CAPSTONE Reservation System
Web app prototype for students
PRIVATE REPOSITORY
Sept. 2016 - Dec. 2016
- Led a team of 8 engineering students to build a large software system with Python & Django, Javascript and SQLite.
- Effectively developed the back-end with object-oriented patterns like identity maps, unit of work, and object relational mapping.
- Project completed in the context of the SOEN 343 Software Architecture & Design I course at Concordia University.

Personal Website
Home on the Web
HTTPS://GITHUB.COM/LANCELAFONTAINE/LANCELAFONTAINE.GITHUB.IO
Nov. 2014 - present
- Designed over many iterations and developed with HTML5, CSS3 and Javascript with minimal use of libraries or frameworks.
- Blazing fast on all devices: Google PageSpeed Insights rates it at 87/100 for mobile and 93/100 for desktop use.
- Fully responsive on mobile devices as ranked by the Google Mobile-Friendly Test.

Other Open-Source Work
Found on GitHub

rust-lang/book	ghosh/uiGradients	lancelafontaine/coding-challenges
lancelafontaine/dotfiles-scripts	lancelafontaine/ractliffe-dog-training	lancelafontaine/Schedulator
lancelafontaine/sqlbolt-exercises	lancelafontaine/opengl-final-project	lancelafontaine/bioinformatics-compbio-tools
lancelafontaine/vim-cheatsheet	lancelafontaine/pressthebutton	lancelafontaine/undergraduate-biology-thesis
lancelafontaine/PokemonCries	lancelafontaine/SynBio-Blocks	lancelafontaine/resume

Awards & Events

2017 • Represented AppHelp by AppDirect at the Canadian University Software Engineering Conference (CUSEC).
2016 • Placed 9th out of 77 teams in Canada at the IEEExtreme programming competition.
   • Selected to compete in the CSGames competition and placed 4th out of 30 North American teams.
   • Placed 1st out of approximately 20 teams at the quarterly AppHelp by AppDirect internal hackathon.
2015 • Received the Inspired Technology Associate award at Staples Canada.
2014 • Received a perfect grade in the evaluation of my B.Sc. undergraduate thesis defense at Concordia University.
   • Graduated from a Bachelor of Science with honours and distinction awards.
   • Received a silver medal at the International Genetically Engineered Machine competition (iGEM).
2013 • Received the Inspired Technology Associate award at Staples Canada.
   • Received a bronze medal at the International Genetically Engineered Machine competition (iGEM).
   • Was placed on the Faculty of Arts and Sciences Dean's List.

Publications

N. Kharma, L. Lafontaine and R. Fenster.
"Biofuels are Not the Full Answer, but They Can Be Part of a Solar-Oriented Solution to Our Energy-Climate Dual Crisis"
International Journal of Renewable Energy and Biofuels. IBIMA Publishing. Accepted in March 2014. Published in August 2016.