

Selim Belhaouane

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in selimbelhaouane

Resourceful software engineer with 5+ years in developing web applications, CAE solutions, and developer tools. Passionate about automation, CI/CD, test-driven development, types, and documentation. Loves both learning and teaching.

experience

MAYA Heat Transfer Technologies Ltd.

Montreal, Canada

Team Lead

2020-Now

Started and lead full-stack development for *Remote Simulation*: an on-premise distributed HPC platform integrated with Simcenter 3D.

- Architected entire system: backend web server, frontend single-page application, Simcenter 3D client, and job runners.
- Lead daily stand-ups and sprint reviews.
- Introduced C++/Docker development at Maya.

Django FastAPI React Typescript Cypress Nginx PostgreSQL Docker C++ Qt

Technical Lead

2017-2020

Lead development for custom NX Open applications.

- Lead software development guild meetings for project in a large organization.
- Developed Python library and tools to be used by engineers for rapid application prototyping. Also wrote extensive documentation and training material for the library.
- Onboarded, code-reviewed, and mentored junior developers.

Python

Individual Contributor

2017-2018

Developed custom NX Open applications for Siemens NX.

Python C++ .NET Framework

Test Engineering Intern

2014-2015

Tested Siemens NX software and integrated solvers.

McGill Centre for Intelligent Machines

Montreal, Canada

Undergraduate Researcher

Summer 2013

Realistic modeling of friction forces at contact between rigid bodies.

MATLAB

education

M.Eng Thesis

McGill University

Mechanical Engineering

2015-2017

Master's in computational fluid dynamics, sponsored by Maya Heat Transfer Technologies.

- Thesis on implementation and validation of turbulence model in academic and commercial (NX Flow) finite volume codes.
- Used NX Open, Tecplot and Python for pre-processing and/or post-processing purposes.
- Developed web interface for querying in-house test suite, which is seen as an essential part of the development process today.

Python Matplotlib Tecplot C++ Fortran MPI jQuery LaTeX

B.Eng

McGill University

Mechanical Engineering

2011-2015

- Designed and manufactured carbon fiber steering wheel as part of Capstone project with McGill Racing Team.
- Gave extracurricular classes on LaTeX.

Python MATLAB C Fortran LaTeX

certifications

Agile Foundation Training

October 2019