

# Matthieu Macret

Full Stack Software Engineer

✉ matthieu.macret@gmail.com

☎ +1 778 229 1058

in [www.linkedin.com/in/mmacret/en](http://www.linkedin.com/in/mmacret/en)

🖥 [matthieumacret.com](http://matthieumacret.com)

## Work Experiences

03/2014 - Present

Vancouver, Canada

### Full Stack Software Engineer

#### Actenum Corporation

Schedule Optimization Software for Upstream Oil & Gas

Tasks/Achievements

- Back end design and development with the Play Framework (Java/Scala), Jersey (Java) and Oracle/MS SQL databases
- Front end design and development with the ExtJS framework (Javascript)
- Migration to a full SaaS delivery model using Amazon AWS
- Java development and architecture for the core functionalities of Actenum's optimization engine (local search and genetic algorithm)

09/2010 - 03/2014

Vancouver, Canada

### Research Assistant

#### Simon Fraser University

Tasks/Achievements

- Designed, developed and tested a genetic programming platform (Python) for evolving sound synthesizers as part of an industrial partnership
- Distributed computation on the Bugaboo cluster using DTM and mpi4py (Westgrid-ComputeCanada)

Contact: Philippe Pasquier

03/2009 - 09/2009

Lille, France

### Software Engineer Intern

#### SNCF

French National Railway Company

Tasks/Achievements

- Developed and maintained an intranet application dedicated to the security examinations of level crossings (ASP.NET, SQL Server)

06/2008 - 09/2008

Paris, France

### Software Quality Assurance Intern

#### Thales Communication

Tasks/Achievements

- Automatized the testing platform for the radio software embedded in the Rafale fighter (Perl)

## Education

09/2010 - 06/2013

Vancouver, Canada

### M. Sc. Artificial Intelligence, New Media

#### Simon Fraser University, SIAT

Courses

- Artificial Intelligence
- Quantitative Research Methods

09/2006 - 09/2009

Marseille/Lille, France

### M.Eng. Computer Science, Information Systems

#### Centrale Marseille/Lille

Courses

- Software Engineering
- Numerical Analysis
- Probability and Statistics
- Algorithmic

## Skills & Competences

Java	●	●	●	●	●
Javascript	●	●	●	●	●
Evolutionary Computing	●	●	●	●	●
Web Technologies	●	●	●	●	●
Amazon Web Services	●	●	●	●	●
SQL	●	●	●	●	●
Scripting Languages	●	●	●	●	●

## Publications

Thesis: Automatic Tuning of the OP-1 Synthesizer Using a Multi-objective Genetic Algorithm. (06/2013)

- Calibrate the parameters of a commercial sound synthesizer to approximate a given target sound using a multi-objective genetic algorithm

Automatic Synthesizer Preset Generation with PresetGen (06/2016)

- Journal of New Music Research

Automatic design of synthesizers using coevolutionary mixed-typed cartesian genetic programming (07/2014)

- Proceedings of the 2014 Annual Conference on Genetic and Evolutionary Computation

Automatic calibration of modified fm synthesis to harmonic sounds using genetic algorithms (07/2012)

- Proceedings of the 9th Sound and Music Computing Conference

## Organizations

Vancouver Rowing Club (2012 - Present)

Competitive Rower

Metacreation Lab (2010 - 2014)

Research Assistant

## Languages



French



English



Spanish

## Interests

Rowing | Traveling | Running | Technology | Craft Beer