SAMI JABER

• APT-602, 3460 Peel Street, Montreal, Quebec, Canada H3A 2M1 • +1 (514) 443 1606 • sami.jaber@mail.mcgill.ca •
• http://www.github.com/samijaber •

EDUCATION

Languages: Trilingual fluency in French, English and Arabic.

McGill University, Faculty of Science, Montreal, QC, Canada — Class of 2015
Bachelor of Science, Joint Honors Degree in Computer Science and Mathematics — GPA: 3.06/4.0
Awards and Societies:

- HackMcGill: Co-Founder; *VP Internal (2013 – Present)*
- CUSEC (Software Conference): *McGill Head Delegate (2013-Present)*
- McGill IEEE Student Branch; *VP Undergraduate Affairs (2012-2013)*
- McGill University Scholarship: *James McGill Entrance Scholarship (2011-2012)*

Theoretical background in: Algorithms & Data Structures, Graph Theory, Combinatorial Optimization, Algebra and Analysis.

OBLIGATORY LONG LIST OF LANGUAGES/SKILLS

Comfortable with Java, Scala, Standard ML • Experience in C, JavaScript (jQuery, Node, d3) • Basic knowledge of HTML, PHP, Python, assembly.

WORK EXPERIENCE

- **Google Summer of Code - Scala Team – Kojo IDE (Script Tracing):** Summer 2013
  - Implemented script tracing into a Scala IDE. The tracer compiles and debugs a user-written **Scala** script, creates a new **Java Virtual Machine** to host the process, then displays its trace history along with all variable values and return values throughout execution.
  - Wrote an object inspector using the Java Debugging Interface. The inspector provides accurate run-time information about an object and all of its children on another JVM at a particular point in the program's execution history.

OTHER EXPERIENCE

- **HackMcGill – Internal Director:** September 2013 - Present
  - Helped found and run the first hacking movement at McGill. Involves beginner lessons (Hack101), weekly HackNights, and sending teams to hackathons. Also multiple groups are formed over many areas of interest (AI, web dev, etc.)

HACKATHONS/PROJECTS/SKILLS

- Y-Hack '13 (24h Hackathon – Team of 3):
  - Created **MathGenius** (http://mathgenius.meteor.com/)**,** a website that allows for the annotation and crowd-sourced interpretation of mathematical theorems and lemmas. Uses a Wikipedia-like format to allow users to add new articles and collaborate on them.
  - Used **JavaScript** and **Meteor.js** for both client- and server-side code.

- McGill CodeJam '13 (48h Hackathon – Team of 5):
  - Wrote the frontend for a machine-learning algorithm that predicts energy consumption for McGill using previous available data.
  - Used **JavaScript**, **nvd3**, **jQuery**, along with other UI libraries.

- McGill CodeJam '12 (48h Hackathon – Team of 3):
  - Wrote a web app that computes multiple moving averages and automates stocks trading decisions.
  - Used **JavaScript** (along with the **Node.js** framework and **Underscore.js**) along with other external libraries.
  - Integrated the algorithms with real-time graphing via the **Socket.IO** library.

- Software Development Course Project:
  - Made essential software development decisions by choosing appropriate **OOP Design Patterns** to write a card game project.
  - Implemented Random, Basic and Advanced AIs that capitalized on an Observer Pattern within the Game Engine to make decisions.

- Artificial Intelligence: Implemented a high win rate Monte-Carlo Tree Search algorithm (with UCB and other heuristics) for a board game.

- Unit Testing: Wrote unit tests over sensible ranges of inputs in **JUnit, JMock** and **ScalaTest**.

- Functional Programming: wrote a type-checker and interpreter in **Standard ML** (type unification, inference and substitution algorithms.)

- Personal Project (High School): Wrote a complete Minesweeper game using **Visual Basic**.