

# Alexander Safatli July 13, 1990

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## Summary

Recent graduate of a Master of Computer Science program at Dalhousie University. Software developer with a reputation for rigorous thinking and methodological consistency. I am looking to start my career in the private sector.

I aspire to learn, design, build, and explore complex

computer models. I also aspire to outgrow any duties given to me. I promise to provide maximum effort, to be open to criticism and new ideas, and to be someone you can trust to adapt and perform to new situations and technologies.

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## Education

Dalhousie University

HALIFAX, CANADA

### Master of Computer Science

2014 – 2015

- Education in Adv. Data Structures, Algorithms, Heuristics, and Natural Language Processing.
- Written a thesis *Sampling Discrete Combinatorial Spaces in Phylogenetics* on combinatorial space visualization and analysis in bioinformatics.

*Supervised by* Assoc. Prof. [Christian Blouin](#). *Extracurricular.* Computer Science Graduate Society, Executive Secretary for later term of 2014.

### Bachelor of Computer Science with Distinction • GPA 3.8 • Dean's List

2008 – 2013

- Thorough understanding of computer science fundamentals.
- Further focus on adv. concepts in mathematics (geometry, cryptography, linear algebra) alongside a strong understanding of chemistry.
- Featured experience working with clients through a Community Outreach program.

*Extracurricular.* Computer Science Society, Dalhousie University, Executive Secretary as of 2012-2013; Sodales Debating Society, Executive Secretary in 2010.

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## Experience

Dalhousie University

HALIFAX, CANADA

### Teaching Assistant — Operating Systems

Winter 2015

*Reference.* Assist. Prof. [Michael McAllister](#).

### Teaching Assistant — Principles of Programming Languages

Summer 2014

*Reference.* Prof. [Philip T. Cox](#).

### Teaching Assistant — Concepts in Computing, Bioinformatics

2012 – 2014

*Reference.* Assoc. Prof. [Christian Blouin](#).

### Research Assistant & Software Developer, Blouin Lab

2012 – 2014

Orchestrated work in different areas of bioinformatics. Helped construct software libraries for geometric morphometric analysis of 2D and 3D biological structures, for molecular dynamics, for protein homology modelling, and for the parsing of essential file formats. Performed a great deal of debugging and restructuring of existing code base. *Reference.* Assoc. Prof. [Christian Blouin](#).

### Teaching Assistant — Communication Skills: Oral/Written

2012 – 2013

*Reference.* Instr. [James Fleming](#).

### Learning Centre Staff, Faculty of Computer Science

2012 – 2013

Worked as a tutor at set hours in a faculty help facility for any Computer Science or Informatics undergraduate-level course. *Reference.* Prof. [Nauzer Kalyaniwalla](#).

### Research Assistant, White Lab

Summer 2010

Worked as a summer research assistant in the Department of Chemistry for a group focused on physical chemistry of materials, and helped write a journal article for the Ashrae 2011 Annual Conference on Solar Panels and the use of Phase Change Materials (PCMs) to store energy. A prototype was helped built for this manner of application for a local facility. *Reference.* Prof. [Mary Anne White](#).

### Research Assistant, Wentzell Lab

Summer 2009

Worked as a summer research assistant in the Department of Chemistry for a group focused on chemometrics and the analysis of chemical data, and helped write a suite of software that helped in the finding of genetic motifs in DNA sequences and to evaluate statistical plots of findings. *Reference.* Prof. [Peter Wentzell](#).

Please refer to [my LinkedIn profile](#) for further details and any relevant recommendations.

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## Publications

- [1] R. Murray, L. Desgrosseilliers, J. Stewart, N. Osbourne, G. Marin, A. Safatli, D. Groulx, and M. A. White, "Design of a latent heat energy storage system coupled with a solar domestic hot water system," in *Proceedings of the World Renewable Energy Congress 2011*, Sweden, May 2011.
  - [2] A. Safatli, J. S. Hleap, K. Nguyen, and C. Blouin, "Automatic definition of homologous shape descriptors for geometric morphometric data," in *Proceedings of the Dalhousie Computer Science In-House Conference 2012 (DCSI2012)*, Halifax, NS, Canada, Sep. 2012.
  - [3] J. S. Hleap, A. Safatli, K. Nguyen, and C. Blouin, "Reference matters: an efficient and scalable algorithm for large multiple structure alignment," in *Proceedings of the International Conference on Bioinformatics and Computational Biology 2013 (BICoB 2013)*, Honolulu, USA, Jan. 2013.
  - [4] A. Safatli and C. Blouin, "Application of ant colony optimization for mapping the combinatorial phylogenetic search space," in *Proceedings of the International Conference on Bioinformatics Models, Methods and Algorithms 2015 (BIOINFORMATICS 2015)*, Lisbon, Portugal, Jan. 2015.
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## Awards & Achievements

Natural Sci. & Eng. Research Council (NSERC)

CANADA

**Undergraduate Student Research Award**

2009, 2012, 2013

Procured funding for the working in a computer science laboratory during the summer term on the merit of grades and indication of interests. Awarded at three different occasions.

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## Skills

**Technical Specialties** Software design and implementation, with(in) a team. Technical and scientific writing. Adv. experience with Python, Java, C, Objective-C, C# (.NET framework), and Perl. Elementary to intermediate knowledge with C++, Go, Scala, Lua, Prolog, Haskell, Scheme, Matlab, and R. Knowledge of database technologies: MySQL, SQLite, NoSQL. Knowledge of web technologies: HTML+CSS, XML, REST, JSON, JavaScript (jQuery, D3).

**Methodologies** Have worked with different tools of machine learning incl. support vector machine (SVM) and random forests. Have also done a large deal of information extraction, data classification, data visualization, and data mining using conventional and classical tools.

**Natural Languages** English (*mother tongue*), Arabic (*limited working proficiency*), and French (*elementary proficiency*).

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## Interests

**Non-exhaustive and in alphabetical order:** Art, cryptography, gaming, guitar, music (collecting, recording), open source, philosophy, reading, typography.

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## Open Source Project Contributions

**Minor Contributions:** [Chromium Browser](#), [App-Icon-Template](#).