

# Victoria Foing

<http://victoriafoing.github.io/portfolio.html>

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## EDUCATION

### MCGILL UNIVERSITY

Montreal, QC

#### Bachelor of Arts, Computer Science and Geography (Urban Systems)

2012 - 2016

Major academic course highlights in Computer Science:

- *Programming*: Data Structures and Algorithms, Programming Languages and Paradigms
- *Logic*: Mathematical Logic, Logic and Computation, Theory of Computation
- *Math*: Calculus, Probability, Linear Algebra, Discrete Structures
- *Systems*: Software Systems, Computer Systems

Major academic course highlights in Geography:

- *Geography*: Cities in the Modern World, New Master-Planned Cities, Urban Field Studies
- *GIS/Statistics*: GIS, Socioeconomic Applications of GIS, Quantitative Methods, Statistics
- *Architecture*: Design for Development, Cultural Landscapes Seminar
- *Sociology*: Social Stratification, Ethnic Relations
- *Environment*: Society and Sustainability, World Environmental Problems, Knowledge and Ethics

### AMERICAN SCHOOL OF THE HAGUE

Wassenaar, the Netherlands

#### International Baccalaureate Diploma

2012

- Cumulative High School GPA of 4.050
- Highest Honours in 2010, 2011, and 2012
- Selected for the National Honour Society based on character, service, and leadership

## PROFESSIONAL EXPERIENCE

### MONTREAL NEUROLOGICAL INSTITUTE

#### McGill Centre for Integrative Neuroscience

Montreal, QC

Software Developer

April 2018 - Present

- Contributing to the design, coding, and maintenance of an open-source neuroscience data management software for a national Autism Spectrum Disorder (ASD) research platform
- Developing features to store and process large datasets for longitudinal and multi-site studies

### NUANCE COMMUNICATIONS

Montreal, QC

Software Tool Developer Intern

Summer 2017

- *"Test Case Management" Tool (Java)*
  - Advanced a web application and database for managing test cases
  - Fixed bugs, enhanced the UI, and coded features to improve test case development
- *"Robo-Commit-Cop" Tool (Python, BASH)*
  - Wrote automated scripts that would search a directory for missing files and locked files, and send emails to responsible testers

Software Testing Intern

Winter 2017

- Worked on a Quality Assurance team for speech dialog systems in cars
- Developed test cases in English, Dutch and German
- Ran regressions to analyze performance of speech recognition software
- Reported software defects in JIRA

### EUROPEAN SPACE AGENCY

Noordwijk, the Netherlands

Data Analytics Intern

Summer 2015

- Gathered data on the number of scientific papers published on ten ESA missions every year for the last 15 years and the countries that published them
- Created interactive data visualizations with the publication data on analytics software
- Used visualizations to compare the impact each mission and country had on scientific literature

## ACADEMIC PROJECTS

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### *Coding projects*

- Web-search engine (Java): explores portion of web with a directed graph and page ranking algorithm
- Spell checker (Python): computes frequency of word pairs in a dictionary to correct spelling
- Turn-based chat (C): uses plain text I/O to communicate messages

### *Urban Systems research projects*

- Songdo: Is this smart city cracking the code of urbanism?
- Facilitating and promoting urban agriculture through mobile phones

### *GIS projects*

- Using GIS to find suitable plots of land for urban agriculture
- Socio-economic applications of GIS:
  - Shortest-path analysis to create walking tour of Old Montreal
  - Geodemographic analysis to find a new location for a high-end audio store
  - Location-allocation of free health clinics
  - 3-D model of McGill campus

## TEAM PROJECTS

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### *Freshest.ai (Python, TensorFlow, Pygame, OpenCV)* May 2018

- Coded an augmented reality application to help individuals reduce food waste
- The application uses computer vision to detect a food product and provides a pop-up with specific information about shelf-life, storage, food preparation, and expiration signs
- Second place at the Artificial Intelligence for Social Good Hackathon

### *Smart Traffic (Python, TensorFlow, Flask, HTML, CSS)* April 2018

- Applied machine learning algorithms to CCTV images from live traffic website
- Determined whether levels of congestion were low, medium, or high
- Built front-end website to display live images with machine learning results

### *Recycling Robot (Robot Operating System, load cell, servos, Arduino)* October 2016

- Competed in a two-week robot-building challenge hosted by McGill Robotics club
- Designed a robot that could weigh bottles and sort them into different boxes

## TECHNICAL SKILLS

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- *Programming concepts:* algorithms, data structures, OO programming, run-time analysis, dynamic and functional programming, logic and computation, databases, full-stack web development
- *Programming languages:*
  - Python, Java, BASH, PHP, SQL, JavaScript, HTML, CSS, Bootstrap, JQuery, React
- *Programming technologies:* Git, SVN, Linux, Node.js, REST, JUnit, TensorFlow
- *Data analytics and visualization:* Excel, MicroStrategy, ArcGIS, R, Stata
- *Graphic design:* Illustrator, Animate, Scenebuilder, Wacom Tablet

## PERSONAL SKILLS

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- Fluent in English, French, German, and Dutch
- Excellent written and verbal skills

## MEMBERSHIPS

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### **Montreal Artificial Intelligence Ethics** March 2018 – Present

- Participating in a meet up group that meets biweekly to discuss AI ethics and safety
- Contributing to articles and public documents (i.e. Montreal Declaration for Responsible Development of AI)

### **McGill Women in Computer Science (McWiCS)** Fall 2016

- Took on a mentorship role as a “Big CSter” in the CSter program, a female-oriented program pairing experienced students with first-year students in Computer Science
- Compiled a guide with advice on academics, extra-curriculars, and job-hunting
- Met with mentee to help her with questions and concerns about Computer Science