

Mohamed Moustafa

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Education

Bachelor of Science in Computer Science, 2020

University of Toronto

- Software Engineering Specialist with courses focusing on **operating systems, compiler optimization, computer graphics, software engineering**, and **algorithms & data structures**
- Undergraduate Student Research Award recipient (value of over **\$4,500 CAD**)
- **10x Teaching Assistant** in courses on **operating systems, software design**, and introductory computer science

Skills

- | | | | | |
|----------|--------------|--------|----------|-----------|
| • C/C++ | • JavaScript | • Bash | • React | • MongoDB |
| • Java | • Haskell | | • NodeJS | |
| • Python | • Android | | • SQL | |

Experience

University of Toronto, Toronto, Canada

Teaching Assistant

Sep 2017 — Present

- Utilized techniques in education to design and deliver engaging lessons in the form of weekly tutorials, teaching over 200 students across 10 teaching assignments to date
- Encouraged student improvement through useful feedback provided while marking course evaluations such as assignments, midterms, and exams

Ontario Ministry of Education, Toronto, Canada

Full Stack Developer

Sep 2017 — Dec. 2017

- Engineered an in-house search engine solution for effective querying of ministry documents, which was previously done manually over the course of several weeks, using **Spring Boot**, expediting the knowledge collection phase
- Utilized OracleXE and Java to create modular object models, making it easier to prototype new front-end designs
- Incorporated the Watson NLU API alongside statistical methods to create a standardized ranking system for document searches
- Extensively used Bootstrap and JavaScript libraries (including jQuery) to construct a front-end that was easily usable by employees of different backgrounds and levels of technical knowledge

Publications

Brian Harrington, Jingyiran Li, **Mohamed Moustafa**, Marzieh Ahmadzadeh, and Nick Cheng. 2019. **On the Effect of Question Ordering on Performance and Confidence in Computer Science Examinations**. In Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE '19). Association for Computing Machinery, New York, NY, USA, 620–626. DOI:<https://doi.org/10.1145/3287324.3287398>

Projects

TrendMap

NodeJS, React, Reddit API, LeafletJS, Material UI, Docker, Redis

An interactive map that allows users to browse top news stories and Reddit posts by region. Data is retrieved from **Reddit** and **NewsAPI** and is cached and updated as frequently as every hour in order to provide a fast browsing experience. I personally worked on the frontend using **React** and **Material UI**, as well as retrieving data from the Reddit API in the backend.