

# MONICA IBRAHIM



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## EDUCATION

### MS in Computer Science, Northeastern University, GPA: 4.0/4.0

Jan '19 - Dec '20

Algorithms (C), Advanced Algorithms, Computer systems (C), Discrete Math, OOD (Java), Databases (SQL), Info Retrieval

### Community Colleges, Edmonds, Lake Washington, Highline, GPA: 4.0/4.0

May - Dec '18

Java 1, Java 2, Linear Algebra, Intro to Python

### Full Time User Experience Design Program, RED Academy

Jul - Sept '17

### BSc, Cognitive Systems, Cognition and Brain Opt, UBC Vancouver, GPA: 3.5/4.33

May '17

Intro to CS (Racket), Models of Comp, Computers & Society, Symbolic logic, Metatheory & Computability, Game theory

## LANGUAGES AND TECHNOLOGIES

**Languages:** Java, C, Python (*Learning: HTML, CSS, Javascript, Typescript, SQL*)

**Tools and Frameworks:** Git, IntelliJ, Pycharm, VSCode, Vim, JUnit, Maven, VirtualBox, gdb, (*Learning: Angular*)

**Operating Systems:** Mac OS, Linux (Ubuntu), Windows

**Design Software:** Sketch, Invision, Marvel

## RELEVANT EXPERIENCE

### Teaching Assistant, Discrete Math, Northeastern University

Sept '19 - present

#### Graph Based Web Crawler

Sept '19

- Wrote a program to crawl Wikipedia pages with throttling support.
- Implemented custom HTML parsing logic for finding neighbouring nodes.

*Python, Regex, HTML, VSCode*

#### Secure Message Verification via RSA Digital Signatures

Aug '19

- Implemented RSA key-pair generation for clients in a simulated banking system.
- Implemented a message signing and verification layer for secure client-server communication.

*Java, IntelliJ, JUnit, Maven, Git, Mac OS*

Mar - Apr '19

#### Distributed Movie Index and Search Engine

- Crawled ~50 files containing info on 5M movies and built a compact multi-layer index over the dataset.
- Built a query processor, an interactive CLI and a concurrent server using sockets to answer movie and search queries.

*C, Vim, VirtualBox, gdb, Git, Linux (Ubuntu)*

#### Personal website: <https://monicaibrahim.com>

Nov '17

*HTML, CSS, Javascript, VSCode, Git*

#### Project Intercept: Disrupting Sex Trafficking through Tech

Jun '17 - Apr '18

- Started a user-focused design process at an early stage of this project.
- Interviewed users at Seattle-based NGOs, used research to design mock-ups and presented to broader engineering team.
- Platform has won several awards. Was presented at dozens of national conferences and to Microsoft CEO and EVPs.

*Sketch, Invision, Mac OS*

## AWARDS & MORE

### Top 15% of UBC Science Winter 2012 class, Golden Key Honors Society

Nov '13

### Co-president, UBC Golden Key Honors Society

Jul - Nov '16

### Distress Volunteer, Crisis Intervention & Suicide Prevention Centre of BC

Sept '13 - Jun '16