

Omar Ibrahim

CURRICULUM VITAE

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INTERESTS

I'm interested in studying Computer Science Education; particularly environments where students are introduced to Computer Science and pedagogy to support student learning and feeling of belonging in computing degrees. My main teaching experience is with introductory computer science courses. My current research focus is on pedagogical tools and course design to support students' sense of belonging within computing classes and equitably support student learning.

EDUCATION

M.S. Computer Science, University of Washington | In Progress

- Currently enrolled in combined BS/MS Program

B.S. Computer Science, University of Washington | 2017 - 2021

- Minor in Informatics
- Annual Dean's List, 2017-18

TEACHING EXPERIENCE (UNIVERSITY OF WASHINGTON)

Instructional Lecturer

CSE 390Z: Mathematics for Computation Workshop

[AUTUMN 2021](#)

A workshop course designed to provide academic support to students enrolled concurrently in the Discrete Mathematics course (CSE 311).

CSE 142: Computer Programming I

[SUMMER 2021](#)

An introduction to programming and computer science using the Java programming language.

Teaching Assistant

CSE 142: Computer Programming I

[21sp](#) (Head TA) – [20au](#) (Head TA) – [20wi](#) (Lead TA) – [19au](#) (Lead TA) – [19sp](#) (Lead TA) – [18au](#) – [18sp](#)

CSE 341: PROGRAMMING LANGUAGES

[20sp](#)

An introduction to basic concepts of programming languages and a detailed study of several different programming paradigms.

CSE 143: Computer Programming II

[19wi](#)

A secondary introduction to programming exploring data types and structures, complexity, recursion, and inheritance.

RESEARCH EXPERIENCE

Taskar Center for Accessible Technology, University of Washington

MARCH 2021 - JUNE 2021

- Conducted research on non-visual localization communication techniques
- Wrote policies and plans for research/testing

Pacific Northwest National Laboratory

AUGUST '16 - MAY '17

- Tested new mass spectrometry data analysis application Formularity, developed to ensure reproducible and accurate measurements

PROFESSIONAL EXPERIENCE

Instructional Lecturer | University of Washington

JUNE 2021 - PRESENT

- Taught a variety of courses (see "Instructional Lecturer" Teaching Experience section above)
- Created lecture content and gave lectures over course content
- Designed/wrote new exercises, assessments, exams, and infrastructure for assessing student work and content mastery
- Designed student homework and course resources to provide additional student support
- Managed and mentored undergraduate TA staff in course administration, teaching techniques, and student support

Undergraduate Teaching Assistant | University of Washington

MARCH 2018 - JUNE 2021

- Taught weekly sections for a variety of courses (see "Teaching Assistant" section above)
- Assessed student mastery of course topics through grading and providing feedback on programming assignments and exams

HEAD TEACHING ASSISTANT

SEPTEMBER 2020 - JUNE 2021

- Managed and advised course TA staff
- Managed, developed, and updated course infrastructure and curricular materials
- Managed course transition to a new grading system and infrastructure

LEAD TEACHING ASSISTANT

MARCH 2019 - MARCH 2020

- Organized, held, and gave talks to intro CS students on computing- and industry-related topics
- Trained new TA staff on teaching/grading practices and expectations

Software Development Engineer Intern | Amazon Web Services

JUNE 2020 - SEPTEMBER 2020

- Developed a new fullstack feature for an internal ec2 capacity insight tool – backend was built with Java connected to AWS, and the tool was integrated into an existing frontend dashboard using AWS, React, and Redux

Software Development Intern | Citrix Systems

JUNE 2019 - SEPTEMBER 2019

- Automated tasks to improve workflow efficiency of engineers using Python and Ansible with AWS
- Developed customer troubleshooting features for Citrix Cloud using jQuery
- Refactored tool infrastructure from jQuery to React

Undergrad Intern - Technical | Washington River Protection Solutions

JUNE 2018 - AUGUST 2018

- Created real-time data visualizations for waste treatment facilities on the Hanford site
- Built attribute templates for data organization and management using R and SQL



VOLUNTEER SERVICE

Mentor | STEM League

JUNE 2020 - AUGUST 2020

- Mentored middle- and high-school students through an 8-week program learning introductory web and data programming skills with HTML, CSS, JS, and Python

Volunteer Tutor | East African Community Services

SEPTEMBER 2017 - DECEMBER 2017

- Tutored under-serviced K-5 students in South Seattle weekly
- Worked with students to build skills and comprehension in math, reading, and writing
- Worked with a representative from the Boy Scouts to provide learning and teamwork exercises for the kids

EXTRACURRICULAR ACTIVITIES & SERVICE

- **GENI** (UW CSE's first-generation student organization); Member (2020 - Present)
- **UW ACM-W**; Member (2019 - Present)
- **UW Arab Student Association**; Member (2019 -Present)
- **Q++** (UW CSE's LGBTQ+ student organization); Member (2018 - Present)
- **UW ACM**; Member (2018 - Present)
- **UW Muslim Student Association**; Member (2018 - Present)
- **UW Concert Band**; Saxophone Player (2018)
- Bassoon, Saxophone, and Flute player

PERSONAL PROJECTS

- [NaviBuzz](#) (2021)
- [Intro Java Style Linter](#) (2020 - 2021)
- [Forager](#) (2020)
- [Intro Java Style Guide](#) (2018 - 2020)
- Octopus (Scheme derivative) Language Interpreter (2018)
- more projects listed on [my portfolio site](#)

