Omar Ibrahim

UNIVERSITY OF WASHINGTON

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EDUCATION

University of Washington, 2021

B.S. COMPUTER SCIENCE | GPA 3.76

- Minor in Informatics
- Annual Dean's List

RESEARCH EXPERIENCE

UW Taskar Center for Accessible Technology

MARCH '21 – PRESENT

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

Pacific Northwest National Laboratory

AUGUST '16 – MAY '17

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

SKILLS & COMPETENCIES

- Taught programming in Java, Python, JS, HTML, CSS, Racket, Ruby, and SML
- Web Development
  - (HTML/CSS, Bootstrap, React, Redux, Jekyll)
- Android Application Development (Java)
- Programming in JavaScript, Java, Python, R, PHP
- Familiarity with C, Ruby, SQL

PROFILE SUMMARY

I have a passion for CS Education, and hope to pursue a graduate degree in CS after graduating. My planned research focus is on student sense of belonging within computing classes and building programming and educational tools that equitably support student learning in order to make CS Education a more equitable experience for students of all backgrounds.

WORK EXPERIENCE

Software Development Engineer Intern

AMAZON WEB SOURCES | *JUNE '20 – SEPT '20*

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

Software Development Intern

CITRIX SYSTEMS | *JUNE '19 – SEPT '19*

- Ensured security of internal dev environments w/ Azure
- 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 '18 – AUG '18*

- Created real-time data visualizations for waste treatment facilities on the Hanford site with JS
- Built and updated attribute templates for data organization and management on PI Asset Framework servers uwith R and SQL

TEACHING EXPERIENCE

UW CSE 142: Computer Programming I
18SP - Present

HEAD TEACHING ASSISTANT
20AU, 21SP

In addition to undergrad TA duties:
- Scheduled and led meetings with the course TA staff, lead TA group, and course instructors
- Managed and advised course TA staff
- Managed, developed, and updated course infrastructure (including course site)
- Developed curricular materials and infrastructure such as projects and assignments, exam material, and standardized grading materials
- Managed course transition to a new grading system and infrastructure

EXPLORATION SESSIONS LEAD TA
19AU, 20WI

In addition to undergrad TA duties:
- Organized, held, and gave talks to intro CS students on computing- and industry-related topics
- Personally gave talks on esoteric programming, the basics of how computers work, and Turing machines and Turing completeness

GRADING LEAD TA
19AU, 20WI

In addition to undergrad TA duties:
- Wrote and reviewed standardized assignment grading criteria
- Wrote new assignments
- Trained new TAs to grade
- Ensured consistent grading across TA staff

UNDERGRADUATE TEACHING ASSISTANT
18SP, 18AU, 19SP, 19AU, 20WI, 20AU, 21SP

Taught introductory programming concepts in Java to a section of 20 - 25 students.
- Taught a weekly quiz section
- Reviewed, graded, and provided feedback on student programming assignments
- Proctored and graded exams.

UW CSE 142: Computer Programming I
21SU

INSTRUCTOR
21SU

I'll be teaching a course on intro programming concepts in Java this coming summer quarter. I currently:
- Hire teaching staff
- Plan and write programming assessments and exams
- Develop general course infrastructure.

This summer I will additionally:
- Give 3 weekly lectures on course material
- Manage TA staff

UW CSE 341: Programming Languages
20SP

UNDERGRADUATE TEACHING ASSISTANT
20SP

Taught programming language concepts and implementation styles to a section of 20 - 25 students through the lenses of SML, Racket, and Ruby.
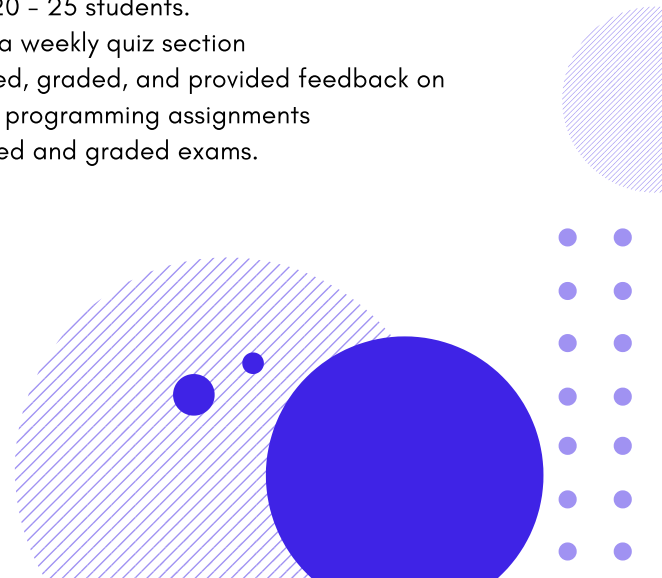- Taught a weekly quiz section with a co-TA
- Reviewed, graded, and provided feedback on student programming assignments
- Graded biweekly programming quizzes

UW CSE 143: Computer Programming II
19WI

UNDERGRADUATE TEACHING ASSISTANT
19WI

Taught introductory Object-Oriented Programming concepts and basic data structures in Java to a section of 20 - 25 students.
- Taught a weekly quiz section
- Reviewed, graded, and provided feedback on student programming assignments
- Proctored and graded exams.

VOLUNTEER EXPERIENCE

STEM League

MENTOR | JUNE '20 - AUGUST '20

Mentored middle- and high-school students through an 8-week program learning introductory programming skills.

- Taught bi-weekly mentoring sessions for a small group of students
- Taught basic skills in web development using HTML, CSS, and JS
- Taught data programming skills in Python
- Mentored students through the development of their own self-guided programming projects

East African Community Services

VOLUNTARY TUTOR | SEP '17 - DEC '17

Tutored under-serviced K-5 students in South Seattle weekly.

- Built skills and comprehension in math and reading
- Developed basic writing skills with students
- Worked with a representative from the Boy Scouts to provide learning and teamwork exercises for students

PROJECTS

- **Intro Java Style Guide**
- **Intro Java Style Linter**
- **NaviBuzz**
- **Forager**
- Octopus (Scheme derivative) Language Interpreter
- more projects listed on **my portfolio site**

EXTRACURRICULARS

- **GEN1** (UW CSE's first-generation student organization); Member
- **Q++** (UW CSE's LGBTQ+ student organization); Member
- **UW ACM**; Member
- **UW ACM-W**; Member
- **UW Arab Student Association**; Member
- **UW Muslim Student Association**; Member
- **UW Concert Band**; Saxophone Player
- Bassoon and Flute player
- Web developer; projects listed on **my portfolio site**