

Ramya Challa

MASTERS STUDENT IN ROBOTICS · OREGON STATE UNIVERSITY

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Education

Oregon State University

Corvallis, OR

MS IN ROBOTICS

Sep 2022 - Present

- Advisor: Prof. Naomi Fitter
- GPA: 3.96

University of Washington

Seattle, WA

BS IN COMPUTER SCIENCE

Sep 2019 - Jun 2022

- GPA: 3.81

Research Experience

Oregon State University - MIME

Corvallis, OR

ADVISORS: PROF. NAOMI FITTER

Sep. 2023 - Present

- Conducting research on robotic interventions for physical, social, and cognitive health for older adults

Oregon State University - MIME

Corvallis, OR

ADVISORS: DR. CRISTINA WILSON

Sep. 2022 - Jun. 2023

- Conducted research on human grasping preferences and novice operator control of decision support systems in underwater manipulation
- Resulted in co-authored paper in preparation and unpublished journal paper slated for 2024

Oregon State University - MIME

Corvallis, OR

ADVISORS: PROF. HEATHER KNIGHT

Sep. 2022 - Jun. 2023

- Conducted research on expressive arm motion
- Resulted in first author paper under preparation

University of Washington - CSE

Seattle, WA

ADVISORS: PROF. SIDDHARTHA SRINIVASA, TAPOMAYUKH BHATTACHARJEE

Aug. 2021 - Sep. 2022

- Designed and co-conducted study on human food acquisition of with a fork
- Performed data preprocessing and preliminary analysis

University of Washington - CSE

Seattle, WA

MENTOR: ETHAN GORDON, TAPOMAYUKH BHATTACHARJEE

Sep. 2019 - Mar. 2020

- Performed code clean up and parametrization

Teaching Experience

University of Washington

Seattle, WA

CSE 333: SYSTEMS PROGRAMMING AND CSE 331: SOFTWARE DESIGN AND IMPLEMENTATION

Mar. 2020 - Jun. 2022

- Prepared and taught C/C++ programming lessons to two sections of 25 students each
- Graded daily assignments, holding office hours, and giving feedback to students
- Created tutorials for Git Source Control, GDB debugging, and Linux commands to ease transition from lower-level courses
- Developed a tool using Google Apps Scripts for office hours management in an online setting

Publications

IN PREP

Ramya Challa, Luke Sanchez, Cristina Wilson, Heather Knight. 2024. "Take it!: Exploring the feature space of expressive arm motion." 2024.

Sean Buchmeier, Mark-Robin Giolando, Kyler Jones, Hunter L Brown, Neha Girish Pusalkar, **Ramya Challa**, Heather Knight, Julie A. Adams, Cristina G Wilson. 2024. "Supporting Novice Human-in-Loop Operation of a Robot System for Grasping Underwater Objects." ACM Transactions on Human-Robot Interaction (HRI) 2024.

PUBLISHED

Ethan Gordon, Amal Nanavati, **Ramya Challa**, Bernie Zhu, Taylor Kessler Faulkner, Siddhartha Srinivasa. 2023. "Towards General Food Acquisition with Human-Informed Actions: Targeting In-Home Robot-Assisted Feeding." Conference on Robot Learning (CoRL) 2023.

WORKSHOPS

Ethan Gordon, Amal Nanavati, **Ramya Challa**, Bernie Zhu, Taylor Kessler Faulkner, Siddhartha Srinivasa. 2023. "Towards General Food Acquisition with Human-Informed Actions." Interdisciplinary Exploration of Generalizable Manipulation Policy Learning: Paradigms and Debates – RSS 2023.

Ramya Challa, Cristina Wilson, Heather Knight. 2023. "Take it!: Exploring the feature space of expressive arm motion." Workshop Your Study Design – HRI 2023.

Professional Experience

Microsoft, Software Engineering Intern

Redmond, WA

POWER PAGES

Summer 2023

- Implemented new natural language feature to enable easier creation and editing of components

Microsoft, Software Engineering Intern

Bellevue, WA

POWER PAGES

Summer 2022

- Simplified maker experience in adding reusable low code components to a website

Facebook, Software Engineering Intern

Seattle, WA

FACEBOOK ASSISTANT

Fall 2021

- Implemented new knowledge base pipeline for Assistant

Microsoft, Software Engineering Intern

Bellevue, WA

POWER PORTALS, NOW POWER PAGES

Summer 2021

- Implemented new low code feature into Power Portals enabling use of native UI without coding knowledge

Mentoring

JORGE RUBALLOS

2023 - present

- Research in physical activity interventions with older adults

LUKE SANCHEZ

2023

- Research in expressive arm motion
- Co-authored paper under preparation

Projects

Keyboard Firmware Writing

Remote

PERSONAL PROJECT

August 2021 - Present

- Contributing to open source QMK, VIA, and VIAL projects using Atmel AVR families
- Writing firmware for new PCBs and mechanical keyboards in C
- Porting keyboards from command line based programming to GUI interface

Keyboard Design

Remote

PERSONAL PROJECT

September 2021 - Present

- Creating custom 40% mechanical keyboard from scratch
- Learning PCB design in KiCAD, CAD in Fusion360, and firmware in QMK
- Designing custom keycap set to create open sourced alphabet legend molds with proceeds going to charity

EmpaTweet

Miami, FL (remote)

SHELLHACKS

September 2020

- Built website that analyzes your tweets' sentiment using a machine learning model and DMs you a cat image if it detects severe anger or sadness
- Built using ReactJS framework, Google Cloud AutoML, and Twitter API
- 2nd Place Best Diversity Hack by FCA, Wolfram Award by Wolfram Language @ ShellHacks 2020 and Best Use of Google Cloud @ BorderHacks

Edge “No Internet” Game

Redmond, WA

//ONEWEEK HACKATHON

July 2019

- Built a JavaScript port of SkiFree as a no-internet game for Edge
- Served as the basis for the current //surf game present on Edge Browser used by millions of users each day

Activities & Service

SERVICE

2024 **ACM/IEEE International Conference on Human Robot Interaction (HRI)**, Reviewer

2024 **IEEE International Conference on Robotics and Automation (ICRA)**, Reviewer

2023 **International Journal of Social Robotics**, Reviewer

2023 - **Robotics Graduate Student Association (RGSA)**, Co-President

Present

OUTREACH

Jun. 2014 - **FIRST Washington**, Judge, Volunteer, Mentor

Seattle, WA

Present

- Operated cameras for live-streamed FIRST Robotics Competition (FRC)
- Served as FIRST LEGO League (FLL) judge at regional, semifinal, and state level
- Started and coached 4 FLL teams at Sunny Hills Elementary School, 2018
- Mentored 2 FLL teams to get top two Robot scores at State Finals consistently, 2016, 2017
- Coached Jr FLL team to win “Robust Design” award at World Championship Festival, 2015
- Advocated for FIRST in low-income areas in Washington state

Nov. 2019, **National Center for Women and Technology**, Awards Reviewer

Seattle, WA

Nov. 2020

- Reviewed high school student applications for the Aspirations and Technology Award

PROFESSIONAL MEMBERSHIPS

Society of Women Engineers

National Center for Women & Information Technology

IEEE