Anya Bouzida

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RESEARCH INTERESTS

My research interests lie in the fields of HCI, HRI, and Human-Centered AI. The goal of my research is to define the needs for, and develop adaptive systems alongside the people who will be using them. The scope of my research pertains to individuals with cognitive impairments, notably people with mild cognitive impairment and dementia.

EDUCATION

University of California, San Diego (UCSD) **Sept. 2021 - June 2025 *(Expected)***
PhD in Computer Science and Engineering *San Diego, CA*
- 3.87 Overall GPA

University of California, San Diego (UCSD) **Sept. 2019 - June, 2021**
BS in Cognitive Science specializing in Machine Learning & Neural Computation *San Diego, CA*
Minor in Computer Science and Engineering
- Summa Cum Laude | 3.97 Overall GPA

MiraCosta Community College **August 2017 - May 2019**
A.A in Liberal Arts – Math and Sciences *San Diego, CA*
- 3.76 Overall GPA

RESEARCH EXPERIENCE

Healthcare Robotics Lab – UCSD
Graduate Student Researcher **Sept. 2021 – June 2025 *(Expected)***
San Diego, CA

- Conducted participatory design research with older adults with mild cognitive impairment to critically understand their frustrations and needs from technology
  - Led interviews, co-design sessions, and conducted thorough thematic analysis
  - Generated design guidelines to dramatically improve technology design for this population
  - Wrote and submitted first author paper to CHI 2023
- Optimized database design and enabled data transfer for a multi-robot system
  - Refined SQLite database schema to store longitudinal interaction and preference data
  - Facilitated translation of data from robot to database
  - Explored quantitative representations of human-robot interaction data

Undergraduate Student Researcher **Dec. 2019 – Sept. 2021**
San Diego, CA

- Conducted qualitative research within the dementia care community to study how robotics technology should be designed for people with dementia and their caregivers in order to best assist

them
    - Engaged stakeholders in co-design sessions where a design probe (SpoonBot) was evaluated for its potential ability to aid people with late stage dementia during mealtimes

PROFESSIONAL COMPETENCIES

- **Programming Languages:** Python, Java, C, C++
- **Python Libraries and DL Frameworks**: TensorFlow, PyTorch, NumPy, Pandas, Scikit-learn, Matplotlib, seaborn
- **Machine Learning Domains:** Unsupervised Learning, Supervised Learning, Reinforcement Learning
- **Mathematics of Machine Learning:** Vector Calculus, Linear Algebra, Probability, Statistics
- **Environments:** Linux & UNIX, Git/GitHub Version Control
- **Spoken Languages:** English, French

AWARDS & HONORS

NSF GRFP Fellow	March 2023
CRA-WP Grad Cohort for IDEALS Member	March 2023
Inclusion Fellow, Robotics: Science and Systems	June 2022
CRA-WP Grad Cohort for Women Member	April 2022
Provost Honors, UCSD	Fall 2019, Winter 2020, Spring 2020, Fall 2021, Winter 2021
President's Permanent Honor Roll, MiraCosta College	Spring 2019
President's List, MiraCosta College	Winter 2017, Spring 2018, Spring 2019

PUBLICATIONS

- **Bouzida, A.**, Murakami, M., and Riek, L.D. "`A hammer to the computer would be a great idea': How People with Mild Cognitive Impairment Navigate Frustration with Technology". *In Preparation*

- Guan, C., **Bouzida, A.**, Oncy-Avila, R., Moharana, S., and Riek, L.D. "Taking an (Embodied) Cue From Community Health: Designing Dementia Caregiver Support Technology to Advance Health Equity". Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, CHI '21. pp. 1-24. [Acceptance rate: 26.3%]

NOTEWORTHY PROJECTS

- **Reinforcement Learning for 2048:** Created an Reinforcement Learning environment of the game 2048, and implemented SARSA and n-step SARSA
- **Social Determinants of Health Predictor:** Implemented a Multi-Layered Perceptron Regressor in order to predict hospital discharge rates given social factors
- **Sports Betting Predictive Model:** Visualization and analytics, implemented a logistic regression model to predict game outcomes
- **Raspberry Pi IP Camera:** Streamed camera input to IP address using FFMPEG

LEADERSHIP EXPERIENCE

Treasurer and Communications Chair, RoboGrads **June 2022 – Present**
UCSD Graduate Organization *San Diego, CA*

- Collaborate with board members to organize community and outreach events for middle and high school students to introduce and engage them in robotics
- Content creation for the Contextual Robotics Institute website at UCSD to better represent the research done, and the students and faculty involved

Instructional Assistant - Introduction to Machine Learning II **March 2021 – June 2021**
UCSD Cognitive Science *San Diego, CA*

- Guided five student final project groups of 5-6 people each
- Led group meetings where we solidified the team's research topic, methods, and goals
    - Supported students understanding of course material necessary to have a successful project
- Held weekly discussions and office hours, reviewed lecture material for students, answered questions
- Graded assignments and provided feedback and optimizations for final projects

Vice President, Tau Sigma Transfer Honors Society **Jan. 2020 – June 2021**
UCSD Chapter *San Diego, CA*

- Organized leadership groups, and assigned tasks to leadership members
- Organized social and community building events with local chapter members and the broader transfer community
- Created themes, and organized slide presentations for bi-weekly General Body Meetings