

Uthman Tijani

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RESEARCH INTERESTS

Human-robot interaction (HRI), Augmented Reality (AR), Robotics, Artificial Intelligence (AI)

EDUCATION

University of South Florida (USF) <i>Ph.D., Computer Science and Engineering</i> <ul style="list-style-type: none">• Advisor: Professor Zhao Han	Aug 2023 - Present Tampa, FL, USA
The Federal University of Technology Akure (FUTA) <i>Bachelor of Engineering, Mechanical Engineering</i>	2017 - 2023 Ondo State, Nigeria

PUBLICATIONS

- **Uthman Tijani**, Hong Wang, and Zhao Han. “[Towards Reproducible Language-Based HRI Experiments: Open-Sourcing a Generalized Experiment Project](#),” 2024 ACM/IEEE International Conference on HumanRobot Interaction (HRI), 2024. **Top HRI conference. 61.3% acceptance rate (Short Contribution).**

EXPERIENCE

Reality, Autonomy, and Robot Experience (RARE) Lab, University of South Florida <i>Research Assistant</i> Projects: <ul style="list-style-type: none">• Anywhere Robot Communication with Mid-Air Fog Screen for Spatial AR.• Open-source generalized Choregraphe package for Language-Based HRI Experiments.	Aug 2023 - Present Tampa, FL
Liensy Robotics <i>Intern</i> <ul style="list-style-type: none">• Developed a line follower robot using an Arduino microcontroller.• Implemented MQTT communication protocol on Raspberry Pi to control LEDs using a mobile app.• Designed a CAD model using SOLIDWORKS for four and six-DOF robot arms, and a potato Washing machine in an automated potato chips production line• Developed a publisher-subscriber node, a service-client node in ROS	May 2021 – Oct 2021 Lagos, Nigeria
Hamoye AI Labs <i>Data Science Intern</i> <ul style="list-style-type: none">• Worked on 3 open-source projects: the UK 2016 road safety data - Analysis on traffic accidents in the UK, Mental health in the tech industry - The OSMI survey 2014, and credit card fraud detection.• Developed Neural Networks models of object detection with satellite images to track the human footprint in the Amazon rainforest.• Built a machine learning classification model for managing the quality metric of global ecological footprint.	July 2020 – Dec 2020 Hamilton, Bermuda
Lafbart Innovations and Consulting Ltd. <i>Vehicle Maintenance and Repair Intern</i> <ul style="list-style-type: none">• Carried out scheduled maintenance and repairs such as ignition and braking system on various vehicles	Nov 2019 – Jan 2020 Akure, Nigeria

HONORS & AWARDS

Dr. Joy A. O'Shields Honorary Scholarship in Engineering Donor: Lakecia Gunter	Aug 2024
2024 CRA-WP Grad Cohort for Inclusion, Diversity, Equity, Accessibility, and Leadership Skills (IDEALS)	Jan 2024

GRANTS

NSF I-Corps Site subgrant | \$3,000

Jan 2024 – July 2024

- Source: NSF's Innovation Corps (I-Corps) Site at the University of South Florida
- Role: Zhao Han (PI), Uthman Tijani (Entrepreneur Lead), Hong Wang (Entrepreneur Lead)

USF Engineering Alumni Society (EAS) Conference Grant | \$250

March 2024

Conference Presentation Grant Program (CPGP), USF Student Government | \$500

March 2024

TEACHING EXPERIENCE

Teaching Assistant, University of South Florida

Aug 2023 - Present

- CGS 1540: Intro to Databases for IT (Aug 2024 - Present)
- COP 4710: Database Design (May 2024 - July 2024)
- COP 3515: Advance Program Design (Jan 2024 - May 2024)
- COP 3514: Program Design (Aug 2023 - Dec 2023)

MENTORING

Undergraduate Researchers:

- Adrian Lozada | *Mid-air fog screen display for robot communication* | May 2024 - Aug 2023
- Villa Keth | *Mid-air fog screen display for robot communication* | May 2024 - Aug 2023

COMMUNITY ENGAGEMENT & LEADERSHIP

JGHC and ITA Culture Exchange Program, University of South Florida

Fall 2023 & Spring 2024

International Teaching Assistant (ITA) Volunteer

- Helped with the completion of the Global Experience Requirement for JGHC undergraduate students.
- Engaged in weekly sessions, exploring diverse aspects of our respective cultures.

ITA/CSD Volunteer Collaboration, University of South Florida

Fall 2023 & Spring 2024

International Teaching Assistant (ITA) Volunteer

- Helped Communications Sciences and Disorders (CSD) undergraduate students gain international perspectives and experience in providing personalized language support.
- Paired with an individual CSD student to address specific language aspects such as pronunciation, grammar, vocabulary, fluency, and cultural nuances.

The Solid Path Initiative, Nigeria

Jan 2021 – April 2024

Volunteer

- Worked with a team of 35 members and successfully donated food items to about 100 Muslims in Iju Community, Ondo State, to mark the holy month of Ramadan.
- Participated in prison visitation and meal donations at the Ondo State Custodial Center Olokuta.
- Made monthly monetary contributions to assist ailing and disadvantaged members of the public.

FUTA MSSN Final-Year Students

Dec 2021 – April 2023

Financial Secretary

- Oversee the association's bank account and keep records of all generated funds and expenses.
- Work with the fundraising team to obtain funding for the construction of the MSSN hostel.

PROFESSIONAL DEVELOPMENT

CRA UR2PhD Graduate Student Mentor Training Program

May 2024 - July 2024

Computing Research Association (CRA) course on effective mentorship and best practices.

Institut de Robòtica i Informàtica Industrial, CSIC-UPC, Barcelona

July 2022

Robotics and AI Summer School

- Workshop on Deep Learning, Assistive Robotics, Human-Robot Interaction (HRI), and Robots Navigation.

Microsoft Certified: Azure AI Fundamentals

2021

Data Science Nigeria (DSN) | AI Boot Camp Qualification Hackathon

Sep 2020

Coven Labs, Nigeria | Data Science and AI Trainee

Dec 2019 – Jan 2020

TECHNICAL SKILLS

Languages: Python, C/C++

Softwares & Tools: Linux, ROS, SolidWorks, MATLAB Simulink, LaTeX, Git, GitHub

Hardware & Prototyping: Arduino, Raspberry Pi, 3D-printing, Laser-cutting

Data Science/Machine Learning: Pandas, NumPy, Matplotlib, seaborn, scikit-learn, Jupyter Notebooks

Augmented Reality: Unity, Vuforia

TALKS

- **Lightening Talk.** "Projected Augmented Reality for HRI Using Fog Screen in Open Environments", [Computing Research Association CRA-WP Grad Cohort Workshop](#), Minneapolis, MN. **April 2024**
- **Oral Presentation.** "Towards Reproducible Language-Based HRI Experiments: Open-Sourcing a Generalized Experiment Project", [2024 USF Graduate Research Symposium](#), Tampa, FL. **March 2024**

MEDIA EXPOSURE

- Computing Research News, "[Summer Courses Are In Session: UR2PhD Is Supporting The Next Generation of Researchers](#)", June 2024.