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)

Aug 2023 - Present

Ph.D., Computer Science and Engineering

Tampa, FL, USA

· Advisor: Professor Zhao Han

The Federal University of Technology Akure (FUTA)

2017 - 2023

Bachelor of Engineering, Mechanical Engineering

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

Aug 2023 - Present

Research Assistant Projects:

Tampa, FL

- Anywhere Robot Communication with Mid-Air Fog Screen for Spatial AR.
- Open-source generalized Choregraphe package for Language-Based HRI Experiments.

May 2021 - Oct 2021 **Liensy Robotics**

Intern

Lagos, Nigeria

- 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

Hamove Al Labs July 2020 - Dec 2020

Data Science Intern

Hamilton, Bermuda

- 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.

Lafbart Innovations and Consulting Ltd.

Nov 2019 - Jan 2020

Vehicle Maintenance and Repair Intern

Akure, Nigeria

Carried out scheduled maintenance and repairs such as ignition and braking system on various vehicles

HONORS & AWARDS

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 Assistant, University of South Florida

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

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 Al Fundamentals

2021

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

Sep 2020

Coven Labs, Nigeria | Data Science and Al Trainee

Dec 2019 - Jan 2020

TECHNICAL SKILLS

Languages: Python, C/C++

Softwares and Tools: Linux, ROS, SolidWorks, MATLAB Simulink, Latex, Microcontroller/Microprocessors (Arduino and Raspberry Pi)

MEDIA EXPOSURE

 Computing Research News, "Summer Courses Are In Session: UR2PhD Is Supporting The Next Generation of Researchers", June 2024.