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)   **Tampa, FL, United States**
Ph.D. in Computer Science and Engineering   *Aug 2023 - present*
Advisor: Prof. Zhao Han

The Federal University of Technology Akure (FUTA)   **Ondo State, Nigeria**
Bachelor of Engineering, Mechanical Engineering   *2017 - 2023*
(Second Class Honors, Upper Division)

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 Human-Robot Interaction (HRI), 2024. **Top HRI conference. 61.3% acceptance rate (Short Contribution).**

- **Uthman Tijani** and Zhao Han. "Prototyping Mid-Air Display for Anywhere Robot Communication With Projected Spatial AR." 2024 International Workshop on Virtual, Augmented, and Mixed-Reality for Human-Robot Interactions at HRI 2024 (VAM-HRI), 2024.

TEACHING

Graduate Teaching Assistant, University of South Florida   *Spring 2024*
COP 3515 Advance Program Design

Graduate Teaching Assistant, University of South Florida   *Fall 2023*
COP 3514 Program Design
- Graded students' exams and weekly programming assignments.
- Conducted office hours and reviewed exam papers with students.

WORK EXPERIENCE

Graduate Research Assistant, University of South Florida   *Aug 2023 - present*
Reality, Autonomy, and Robot Experience (RARE) Lab
Advisor: Prof. Zhao Han
Projects:
- Anywhere Robot Communication with Mid-Air Fog Screen for Spatial AR
- Open-source generalized Choregraphe package for Language-Based HRI Experiments

Liensy Robotics, Lagos, Nigeria *May 2021 – Oct 2021*
Intern
- 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 & 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

Hamoye AI Labs, Hamilton, Bermuda *July 2020 – Dec 2020*
Data Science Intern
- 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. Akure, Nigeria *Nov 2019 – Jan 2020*
Vehicle Maintenance & Repair Intern
- Carried out scheduled maintenance and repairs (such as ignition and braking system) on various vehicles

HONORS & AWARDS

2024 CRA-WP Grad Cohort Workshop for IDEALS *Jan 2024*
Minneapolis, MN

GRANTS

USF Engineering Alumni Society (EAS) Conference Grant *March 2024*
Amount: $250

Conference Presentation Grant Program (CPGP) *March 2024*
Source: USF Student Government
Amount: $500

NSF I-Corps Site subgrant *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)
Amount: $3,000

TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++

- **Software & Tools:** Linux, ROS, SolidWorks, MATLAB Simulink, Microcontroller/Microprocessors (Arduino and Raspberry Pi)

LEADERSHIP

Muslim Students Society of Nigeria (M.S.S.N FUTA) **Akure, Ondo State**
Financial Secretary (Final-Year Students) *Dec 2021 – April 2023*
- 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

VOLUNTEER & COMMUNITY SERVICE

JGHC and ITA Culture Exchange Program, USF   *Fall 2023 & Spring 2024*
ITA Volunteer
- Facilitated the completion of the "Global Experience Requirement" for JGHC undergraduate students.
- Conducted weekly one-hour meetings, exploring diverse aspects of our respective cultures.

ITA/CSD Volunteer Collaboration, USF   *Fall 2023 & Spring 2024*
Volunteer
- Facilitated a valuable exchange where Communications Sciences and Disorders (CSD) undergraduate students benefited from international perspectives on language, gaining valuable 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   *2021 – Present*
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.

PROFESSIONAL DEVELOPMENT TRAINING AND CERTIFICATION

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

Udemy Online Course   *2022*
ROS for Beginners: Basics, Motion, and OpenCV - Prof. Anis Koubaa
MATLAB/SIMULINK - Dr. Ryan Ahmed

Microsoft   *2021*
Microsoft Certified: Azure AI Fundamentals

Data Science Nigeria (DSN)   *Sep 2020*
AI Boot Camp Qualification Hackathon

Coven Labs. Akure, Nigeria   *Dec 2019 – Jan 2020*
Data Science and AI Trainee

REFERENCES

Professor Zhao Han
Assistant Professor, Department of Computer Science and Engineering,
University of South Florida
Tampa, FL, United States.
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Professor O. A. Dahunsi
Senior Lecturer, Department of Mechanical Engineering,
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