

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)
Ph.D. in Computer Science and Engineering
Advisor: Prof. Zhao Han

Tampa, FL, United States
Aug 2023 - present

The Federal University of Technology Akure (FUTA)
Bachelor of Engineering, Mechanical Engineering
(Second Class Honors, Upper Division)

Ondo State, Nigeria
2017 - 2023

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
COP 3515 Advance Program Design

Spring 2024

Graduate Teaching Assistant, University of South Florida
COP 3514 Program Design

Fall 2023

- 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
Reality, Autonomy, and Robot Experience (RARE) Lab
Advisor: Prof. Zhao Han
Projects:

Aug 2023 - present

- 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

ACM/IEEE International Conference on Human-Robot Interaction (HRI 2024), Boulder, CO

March 2024

Theme: HRI in the real world

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

Coursera - University of California, Santa Cruz

2022

C for Everyone: Programming Fundamentals

Udacity Online Course

2022

C++ for Programmers

Coursera - University of California San Diego

2022

Algorithmic Toolbox

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

Africa's Young Entrepreneurs (A.Y.E) Annual Convention
Poverty Eradication through Entrepreneurial Invention

Dec 2019

Nigerian Institution of Mechanical Engineers (NiMechE, Nigerian Society of Engineers)
The 32nd International Conference and Annual General Meeting
Towards a Modern Manufacturing Technology & Practice for National Economic Growth

Oct 2019

TME Education - Transfer Multisort Elektronik, Poland
Electronics & IOT Development

July 2019

Bitgrit FUTA Student Community
Data Science and Artificial Intelligence

July 2019

School of Engineering and Engineering Technology, FUTA
Course: *"Engineers-in-Society"*
Symposium: *"The Role of Engineers in National Development"*

Oct 2018

REFERENCES

Professor Zhao Han

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Tampa, FL, United States.
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Professor O. A. Dahunsi

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