

Nhan Tran

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I aspire to design naturalistic human-agent teaming experience and adaptive technologies that augment human capabilities.

RESEARCH INTERESTS

Human-robot interaction
Mixed reality
Augmented reality
Virtual reality
Artificial intelligence
UI/UX Design
Human-computer interaction

SKILLS

PROGRAMMING

Python / Java / C++ / C# / SQL

OTHER

Unity3D / gRPC / Linux / Web Services / TCP/IP / Computer Networks / Robot Operating Systems

LANGUAGES

Bilingual in Vietnamese & English / Spanish (Proficient)

DESIGN

Photoshop / After Effects / Premiere / Sketch

AWARDS

- AR/VR Grand Prize @ Stanford University Hackathon 2020
- Best AR/VR Project For Community Building @ Yale Hackathon 2019
- 3rd Place @ Google Games 2018
- UC Berkeley CalHacks Fellowship 2018
- Google C-MAPP Fellowship 2017
- 1st Place @ LinkedIn Hackathon 2017
- 2nd Place @ Xilinx Hackathon 2017
- Best IoT Hack @ HackHarvard 2017

EDUCATION

Colorado School of Mines

M.S. and B.S. Computer Science + Robotics and Intelligent Systems
Masters Thesis Advisor: Dr. Tom Williams

Honors: Outstanding Undergraduate Researcher 2018, Daniels Scholar-full college scholarship

Aug. 2014 - 2020
GPA: 3.912/4.000

Harvard Business School Online

An online certificate, 150 hours program that trains students to apply essential business skills via 3 courses: Business Analytics, Economics for Managers, and Financial Accounting.

CORe Credential of Readiness

June 2018 - Sept. 2018

PROFESSIONAL EXPERIENCE

Robust.AI

Summer Research Intern

- Working with the **Perception team** at an early stage robotics startup. Limited information under NDA.
- Improve human-machine interaction using **augmented reality**.

June 2020 - Present
Palo Alto, CA

Facebook

Production Engineering Intern

- Saved team from capacity overloads by building automation tools that analyze historical data and efficiently control the sampling rates of machine learning experiments related to ads targeting.

May 2019 - Aug. 2019
Seattle, WA

NASA-Caltech Jet Propulsion Laboratory

Process Management & Software Intern

- Researched & resolved bottlenecks in Mars 2020 Rover's Sampling & Caching Subsystem's cleaning process.
- Reduced **50% lead time** by designing an assembly tracking system to optimize operations workflows.

July 2018 - Aug. 2018
Pasadena, CA

Google Nest

Software Engineering Intern

- Reduced **man-hours by 90%** by revamping an internal robotics control tool.

May 2017 - Aug. 2017
Palo Alto, CA

RESEARCH EXPERIENCE

Mines Interactive Robotics Research Lab

Graduate Researcher and Project Lead (Advised by Dr. Tom Williams)

- Integrated mixed reality headsets, humanoid robots, and neurophysiological sensors to research how human mental workload is affected by or in turn affects mixed reality robot communication.
- Led the Augmented Reality for Human-Robot Interaction research team.
- Invited twice to AAAI (2019, 2018) conferences to lead educational outreach workshops.

June 2018 - Present
Golden, CO

Colorado School of Mines, Computer Science

Undergraduate Research Fellow (Advised by Dr. Tom Williams)

- Researched and contributed to the lab's distributed Robotic Architecture's components (referring expression generation, pragmatics, and computer vision) to facilitate natural human-robot interaction.

Aug. 2017 - May 2018
Golden, CO

SELECTED PUBLICATIONS

Adapting Mixed Reality Robot Communication to Mental Workload · 2020

Nhan Tran

HRI Pioneers Workshop at ACM/IEEE International Conference on Human-Robot Interaction | HRI, 2020
A highly competitive doctoral workshop at the top venue for HRI research

Exploring Mixed Reality Robot Communication Under Different types of Mental Workload · 2020

Nhan Tran and Kai Mizuno and Trevor Grant and Thao Phung and Leanne Hirshfield and Tom Williams

3rd International Workshop on Virtual, Augmented, and Mixed Reality for Human-Robot Interaction | VAM-HRI, 2020

Mixed Reality Deictic Gesture for Multi-Modal Robot Communication 2019

Tom Williams and Matthew Bussing and Sebastian Cabrol and Elizabeth Boyle and Nhan Tran
ACM/IEEE International Conference on Human-Robot Interaction | HRI, 2019

TEACHING EXPERIENCE AND LEADERSHIP

Graduate Student Instructor · Colorado School of Mines

- Teach & redesign Intro to Computer Science course (Spr 2020, Spr 2019, Fall 2018) for 350+ students.
- Demonstrate technical ideas by creative analogies and fostering a love of computer science in undergrads.

Aug. 2018 - May 2020

Robotics Club President & Project Manager · University Robotics Team

- Led 50 engineering students in 6 robotic competitions. Facilitating triannual outreach activities.

Aug. 2014 - Dec. 2017

Other Scientific Activity and Community Service

- Web Chair for the 2021 ACM/IEEE International Conference on Human-Robot Interaction, HRI 2021
- Reviewer for the 2020 ACM/IEEE International Conference on Human-Robot Interaction, HRI 2020
- Application Reviewer for the highly selective Greenhouse Scholars 2020