

# Nhan Tran

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## SKILLS

### PROGRAMMING

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

### OTHER

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

### LANGUAGES

Bilingual in Vietnamese & English/ Spanish (Proficient)

### DESIGN

Photoshop / After Effects / Premiere / Sketch

## AWARDS

- 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
- 1st Place ConocoPhillips Programming Challenge 2016

## HOBBIES

FILMMAKING, VIDEO & VISUAL EFFECTS EDITING  
[trannhan.com/youtube](http://trannhan.com/youtube)

DESIGN GRAPHICS & EDIT ART JOURNAL  
[highgrade.mines.edu](http://highgrade.mines.edu)

## RELEVANT COURSES

Augmented Reality  
Computer Vision  
AI & Machine Learning  
Robot Planning & Manipulation  
Human-Robot Interaction  
Human Centered Robotics

## EDUCATION

**Colorado School of Mines**  
M.S. and B.S. Computer Science + Robotics and Intelligent Systems  
Thesis Advisor: Dr. Tom Williams  
Honors: Outstanding Undergraduate Researcher 2018, Daniels Scholar-full college scholarship

Aug. 2014 - 2020  
GPA: 3.860/4.000

## PROFESSIONAL EXPERIENCE

**Facebook**  
**Production Engineering Intern** May 2019 - Aug. 2019  
Seattle, WA

- 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 Facebook's ads targeting.
- Facilitated weekly discussions with cross-functional team of research scientists, product manager, data, software and production engineers to streamline the capacity planning process.

**NASA-Caltech Jet Propulsion Laboratory**  
**Software Engineer Intern** July 2018 - Aug. 2018  
Pasadena, CA

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

**Google Nest**  
**Software Engineering Intern** May 2017 - Aug. 2017  
Palo Alto, CA

- Reduced **man-hours by 90%** by developing the **Robot Operating System (ROS)** packages, localization system (LIDAR), and graphical user interface for testing internal robot sensors.

## RESEARCH EXPERIENCE

**Mines Interactive Robotics Research Lab**  
**Graduate Researcher and Project Lead (Advised by Dr. Tom Williams)** June 2018 - Present  
Golden, CO

- Leading the Augmented Reality in Human-Robot Interaction research team. Mentoring undergrad labmates.
- Researching **adaptive human-machine teaming** by designing **Mixed Reality interfaces** and analyzing brain-computer interface **data** (BCI) in collaboration with Dr. Leanne Hirshfield at CU Institute of Cognitive Science.
- Invited twice to AAAI (2019, 2018) conferences to lead educational outreach workshop.

**Colorado School of Mines, Computer Science**  
**Undergraduate Research Fellow (Advised by Dr. Tom Williams)** Aug. 2017 - May 2018  
Golden, Colorado

- 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.

## TEACHING EXPERIENCE AND LEADERSHIP

**Graduate Student Instructor** · Colorado School of Mines Aug. 2018 - May 2019

- Taught and redesigned the Intro to Computer Science course (Spring 2019, Fall 2018) for 350+ students.
- Demonstrated abstract theories and inspired in undergraduates a love of Computer Science.

**Robotics Club President & Project Manager** · University Robotics Team Aug. 2014 - Dec. 2017

- Led 50 engineering students in 6 robotic competitions. **Grew club members from 8 to 71.**
- Sparked 100 local kids interests in STEM by facilitating triannual outreach activities. Raised \$6000.

## RESEARCH AND PUBLICATIONS

**A Hands-Free Virtual-Reality Teleoperation Interface for Wizard-of-Oz Control** · 2018  
**Nhan Tran**, Josh Rands, and Tom Williams  
International Workshop on Virtual, Augmented, and Mixed Reality for HRI | VAM-HRI, 2018

**Augmented, Mixed, and Virtual Reality Enabling of Robot Deixis** · 2018  
Tom Williams, **Nhan Tran**, Josh Rands and Neil T. Dantam  
VAMR/HCI International Conference on Virtual, Augmented and Mixed Reality | VAMR, 2018

**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

## SELECTED PROJECTS

**Robotics Engineer** · Wall-E Inspired Robot capable of VR Teleoperation

- Self-learned Tensorflow and NVIDIA Jetson TX2 to build a robot that understood ASL. [trannhan.com/walle](http://trannhan.com/walle)

**AR/VR Developer** · Sculpt Trace - Mixed Reality training tool for sculpting @ MIT Media Lab

- Co-developed an interactive Microsoft HoloLens app to teach sculpting. [trannhan.com/sculpt-trace/](http://trannhan.com/sculpt-trace/)