Khang M. Nguyen

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RESEARCH INTERESTS

Robotic Grasping, Robotic Perception, Cognitive Architecture.

EDUCATION

University of Texas at Arlington   August 2020 – May 2024
B.Sc. *(Hons.)* in Computer Science, Minor in Bioengineering & Mathematics   Arlington, TX
<u>**Cumulative GPA:**</u> 3.82/4.00   <u>**Major GPA:**</u> 3.90/4.00   <u>**Dean's List:**</u> 5 semesters from Spring 2021 to Spring 2023.
<u>*Coursework:*</u> Advanced Linear Algebra, Algorithms & Data Structures, Artificial Intelligence, Autonomous Robots, Computer Vision, Engineering Probability & Statistics, Machine Learning, Medical Imaging, Multivariable Calculus, Neural Networks & Deep Learning, Signal Processing, Statistical Inference, Operating Systems, and Unmanned Vehicle Systems.
<u>**Thesis:**</u> In Progress   *Advisor: Dr. Manfred Huber*

RESEARCH EXPERIENCE

Learning and Adaptive Robotics Lab   August 2022 – Present
Undergraduate Research Assistant   Arlington, TX

Robotic Vision Lab   October 2022 – May 2023
Undergraduate Research Assistant   Arlington, TX

Wireless and Sensor Systems Lab   August 2021 – August 2022
Undergraduate Research Assistant   Arlington, TX

RESEARCH ACTIVITIES

<u>Conference Proceedings:</u>

[5] **K. Nguyen**, T. Dang, and M. Huber. "Online 3D Deformable Object Classification for Mobile Cobot Manipulation". In *Proceedings of the International Symposium on Robotics (ISR)*, Stuttgart, Baden-Wurttemberg, Germany, September 2023.
▷ Paper | Code | Demo

[4] T. Dang, **K. Nguyen**, and M. Huber. "Multiplanar Self-Calibration for Mobile Cobot 3D Object Manipulation using 2D Detectors and Depth Estimation". In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Detroit, MI, October 2023.
▷ Paper | Code | Demo

[3] T. Dang, **K. Nguyen**, and M. Huber. "*ExtPerFC*: An Efficient 2D and 3D Perception Software-Hardware Framework for Mobile Cobot". arXiv, June 2023.
▷ Paper | Code | Demo

[2] T. Dang, **K. Nguyen**, and M. Huber. "*PerFC*: An Efficient 2D and 3D Perception Software-Hardware Framework for Mobile Cobot". In *Proceedings of the International FLAIRS Conference (FLAIRS)*, Clearwater Beach, FL, May 2023.
▷ Paper | Code | Demo

[1] T. Dang, T. Tran, **K. Nguyen**, T. Pham, N. Pham, T. Vu, and P. Nguyen. "*IoTree*: A Battery-free Wearable System with Biocompatible Sensors for Continuous Tree Health Monitoring". In *Proceedings of the ACM International Conference on Mobile Computing and Networking (MobiCom)*, Sydney, NSW, Australia, October 2022.
▷ Paper | Code | Demo

<u>Abstracts & Poster Presentations:</u>

[2] **K. Nguyen** and W.J. Beksi. "An Autonomous Indoor Personal Robot with Real-Time Object Detection" at *the Annual UTA Innovation Day*, Arlington, TX, April 2023.
▷ Poster | Code

[1] H. Affleck, **K. Nguyen**, K. Brown, and Y. Liao. "The Use of Social Media Advertisements to Recruit a Diverse Sample of Hispanic and Black Women for a Virtual Focus Group Study" at *the American Public Health Association Annual Meeting and Expo (APHA)*, Boston, MA, December 2022.

<u>Conference Reviewing:</u>

- *The 19th IEEE International Conference on Automation Science and Engineering* (CASE '23).
- *The 20th IEEE International Conference on Ubiquitous Robots* (UR '23).

<u>Professional Affiliations:</u>

- *IEEE Member* (2023 – Present)
- *ACM Member* (2023 – Present)

OUTREACH ACTIVITIES

UTA Senior Design Team　　　　September 2023 – Present
Team Leader　　　　Arlington, TX

HackMIT Hackathon　　　　October 2022
Participant　　　　Boston, MA

GaTech IEEE RoboTech Hackathon　　　　April 2022
Team Leader/Participant　　　　Atlanta, GA

Wolfram High School Summer Research Program　　　　June 2019 – July 2019
Participant　　　　Boston, MA

TEACHING EXPERIENCE

OurCS@DFW Workshop: CPS-Health　　　　February 2022
UTA Department of Mathematics　　　　February 2022 – May 2022

AWARDS & HONORS

UTA Research Experiences for Undergraduates Sponsorship　　　　October 2022
Sponsored by UTA COE and UTA Robotic Vision Lab

Sponsorship Award for Assistive Technologies at HackMIT　　　　October 2022

Top 8 of GaTech IEEE RoboTech Hackathon　　　　April 2022

2nd Place in Body Track & 3rd Place in Electrical Track　　　　April 2022
Awarded by GT IEEE RoboTech Hackathon Committee

UTA Freshman Distinction Roll Recognition Recipient　　　　December 2020

UTA Maverick Academic Scholarship Recipient　　　　August 2020

AP Scholar with Distinction Recipient　　　　July 2020
Awarded by College Board

Honorable Mention of the 14th Geometrical Olympiad in Honor of I. F. Sharygin　　　　August 2018
Ranked 10th over 49 participants in the Final Round

Honorable Mention of Singapore Mathematical Olympiad Open　　　　June 2018

Bronze Medal of Vietnamese Mathematical Youth Talent Search　　　　April 2018
Ranked 13th over 198 participants in Grade 10

Bronze Ruler of the 4th Iranian Geometrical Olympiad　　　　September 2017
Ranked 4th nationally - Ranked 57th internationally

Second Prize of the Municipal Mathematical Competition　　　　March 2017

TECHNICAL COMPETENCIES

Coding & Software: Python, C/C++, MATLAB, Mathematica, HTML/CSS, JS, Java, and ROS.
Designing & Fabrication Tools: Arduino, SOLIDWORKS, Prusa, Formlabs, NVIDIA Jetson, and Raspberry Pi.

PROFESSIONAL REFERENCES

Dr. Manfred Huber, Ph. D.
Professor, Dept. of Computer Science & Engineering
Director, Learning and Adaptive Robotics Lab
The University of Texas at Arlington
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Dr. Vassilis Athitsos, Ph. D.
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Director, Vision-Learning-Mining Lab
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Dr. William Beksi, Ph. D.
Assistant Professor, Dept. of Computer Science & Engineering
Director, Robotic Vision Lab
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