

Zixiong Han

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Education

Northeastern University

Bachelor of Engineering. GPA: 8.1/10

Student Athlete (Soccer), Excellent Bachelor Thesis Award

Shenyang, China

Sept. 2014 – Aug. 2018

University of Ottawa

Master of Applied Science, Electrical and Computer Engineering. GPA: A - 9.0/10

Ottawa, ON

Sept. 2018 - Aug. 2021

University of Ottawa

Doctorate in Philosophy Electrical and Computer Engineering. GPA: A - 9.3/10

Ottawa, ON

Sept. 2021 – Dec. 2025

Experience

University of Ottawa

Research Assistant

Ottawa, ON

Jan. 2020 – Present

- Lead the Radar Indoor Monitoring Research program of the uOttawa Health Device Research Group
- Designed, developed and installed experimental radar devices to collect daily data from over 15 volunteers at Heart Institute and senior homes
- Simulate and process radar signals for target detection, tracking, vital extraction and routine analysis
- Simulate and process vital signals for breathing rate and heart rate estimation and abnormal pattern identification

University of Ottawa

Teaching Assistant

Ottawa, ON

Jan. - May, Sept. - Dec. 2020

- Course: Principles and Design of Advanced Biomedical Instrumentation

Neusoft Corporation

Onsite Software Engineer

Shenyang, China

Dec. 2017 – Feb. 2018

- Assist in operating and maintaining hospitals' lab information system

Activities

University of Ottawa

NSERC Lab2Market Entrepreneur Lead

Ottawa, ON

Mar. – Jul. 2022

- Conducted market research to assess the market potential of radar indoor monitoring technology
- Delivered elevator pitch and synthesized research findings into comprehensive market reports

Publication

1. A real-time respiration monitoring and classification system using a depth camera and radars.
He, Shan¹, **Zixiong Han**¹ and Cristóvão Iglesias¹.
Frontiers in Physiology 13 (2022): 799621.

2. Detection of respiratory signal based on depth camera body tracking.

Yang, Fan¹, **Zixiong Han**² and Miodrag Bolic³.

2020 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). IEEE, 2020.

Skills

Technical: Radar Signal Processing, Digital Signal Processing, Machine Learning

Engineering: IoT Development, Full-Stack Development, Android Development

Programming Languages: Python, Matlab