Zixiong Han

• Ottawa, Ontario • zhan045@uottawa.ca • 613 890-7618

Education

University of Ottawa — Ottawa, ON
Doctorate in Philosophy Electrical and Computer Engineering. GPA: A - 9.3/10 — Sept. 2021 – Present
(Expected graduation date: Dec. 2025)

University of Ottawa — Ottawa, ON
Master of Applied Science, Electrical and Computer Engineering. GPA: A - 9.0/10 — Sept. 2018 - Aug. 2021

Northeastern University — Shenyang, China
Bachelor of Engineering. GPA: 8.1/10 — Sept. 2014 – Aug. 2018
Student Athlete (Soccer), Excellent Bachelor Thesis Award

Experience

University of Ottawa — Ottawa, ON
Research Assistant — Jan. 2020 – Present

- Lead the Radar Indoor Monitoring Research program of the uOttawa Health Device Research Group
- Design, develop and install 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 — Ottawa, ON
Teaching Assistant — Jan. - May, Sept. - Dec. 2020

- Course: Principles and Design of Advanced Biomedical Instrumentation

Neusoft Corporation — Shenyang, China
Onsite Software Engineer — Dec. 2017 – Feb. 2018

- Assist in operating and maintaining hospitals' lab information system

Activities

University of Ottawa — Ottawa, ON
NSERC Lab2Market Entrepreneur Lead — 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, Shan[1], **Zixiong Han[1]** and Cristóvão Iglesias[1].
   Frontiers in Physiology 13 (2022): 799621.

2. Detection of respiratory signal based on depth camera body tracking.
   Yang, Fan[1], **Zixiong Han[2]** and Miodrag Bolic[3].
   2020 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). IEEE, 2020.

Skills

Technical
- Radar Signal Processing
- Digital Signal Processing & Adaptive Signal Processing
- Machine Learning & Deep Learning
- Long-term Data Management and Analysis

Engineering
- Device enclosure Design and Manufacture
- IoT Development
- Full-Stack Development (JavaScript back-end and Java front-end)
- Android App Development (Java)
- Python and MATLAB

Entrepreneur
- Online Survey Questionnaire Design
- Interviewing Stakeholders
- Conducting Market Research
- Presenting Elevator Pitch