

# Yuemin(Austin) Yu

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in Yuemin Yu    🌐 YuyueminAustin

## Education

### The University of Hong Kong

Sept. 2021 – June 2025

BEng in Computer Science, Department of Computer Science, School of Computing and Data Science

- GPA: 3.56/4.3

### University of Toronto

Jan. 2024 – Apr. 2024

Exchange Student, Department of Computer Science, Faculty of Arts & Science

- GPA: 3.43/4.0

## Projects

### Real-Time Respiration Monitoring and Presence Detection

July 2023 - Jan. 2024

HKU AIoT Lab

- A web application which implemented novel acoustic sensing algorithm
- Provided ubiquitous and non-invasive sensing on breathing and presence based on acoustic signals
- Tools Used: Python, Streamlit

### IR-UWB Radar based Breathing Rate Estimation

Aug. 2023 - Sept. 2023

HKU AIoT Lab

- Applied algorithms on IR-UWB signals to estimate breathing rate of the user
- Tools Used: Python, IR-UWB radar

### Geometry Aware Room Impulse Response Generation and Visualization (Ongoing)

Sept. 2024 - present

HKU AIoT Lab

- Implementing Diffusion-based deep learning models to generate Room Impulse Response
- Using React to build a frontend for visualization of the generated signals
- Tools Used: Python (Pytorch), React

## Publications

### Statistical Acoustic Sensing For Real-Time Respiration Monitoring and Presence Detection

Sheng Lyu, Ruiming Huang, **Yuemin Yu**, Chenshu Wu,

Mobisys' 2024 Demos, DOI: [10.1145/3643832.3661846](https://doi.org/10.1145/3643832.3661846) [🔗](#)

## Experience

### Research Assistant, [HKU AIoT Lab](#)

June 2023 - present

Supervisor: Prof. Chenshu Wu, Department of Computer Science, HKU

Hong Kong

- Completed Summer Research Internship of the Department, 58 participants in total

### Mitacs Research Intern, [The Hu Lab](#), [Western University](#)

London, Canada

Supervisor: Prof. Pingzhao Hu, Department of Biochemistry, Western University

June 2024 - Sept. 2024

- Worked as Research intern in the lab, with the support of Mitacs Research Internship Award
- Initiated the project of Machine-learning Assisted Wearable Sensor design

**Student Teaching Assistant**, *Department of Computer Science, HKU*

Hong Kong  
*Sept. 2022 - Nov. 2022*

- Worked as a student teaching assistant for the course ENGG1330, an introductory programming course
- Conducted tutorials on a weekly basis, responded to students' questions

## Awards

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HKU Foundation entrance scholarship, HKU (full tuition)

*Sept. 2021 - present*

Dean's Award, Faculty of Engineering, HKU

*Sept. 2021 - June 2022*

Mitacs Globalink Research Internship Award Candidate (Western University)

*Feb. 2024*

Exchange Scholarship, HKU

*Mar. 2024*

## Abilities

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### Programming Languages:

Python (Numpy, Pandas, Pytorch), Java, C++, Haskell, HTML&CSS, Javascript, SQL, R

### CS Related Courses:

- Core: Computer Organization (A), Discrete Mathematics (A-), Computer Networks (A+), Algorithm Design & Analysis & Complexity (A-)
- AI related: Introduction to Deep learning for computer vision (A+)
- Other: Bioinformatics (A), Web Programming (A+), Programming I (Python, A-), Programming II (Linux and C++, A),

### Maths & Stats Related Courses:

Fundamental calculus (A+), Linear Algebra & Probability & Statistics (A), Statistics: Idea and Concepts (A), Multivariable Calculus

### Speaking Languages:

English (Obtained IELTS 7.5 with 7 in speaking in 2023.03), Mandarin (Native), Cantonese (Basic)

## Activities

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Peer Mentor of Faculty of Engineering, HKU

*Aug. 2023 - present*

Member, Team INVENEER, finalist, AWS Educate Business Innovation Competition 2022, AWS HK

*Oct. 2022*