# Yuemin(Austin) Yu

 Hong Kong/Shanghai     yuyuemin@connect.hku.hk     +852 5575 2418     yuyueminaustin.github.io

**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 (3.69/4.0 under WES Evaluation)

**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**                     *Sept. 2024 - present*
**(Ongoing)**
*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*                            *June 2024 - Sept. 2024*
Supervisor: Prof. Pingzhao Hu, Department of Biochemistry, Western University                London, Canada

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

**Student Teaching Assistant,** *Department of Computer Science, HKU*  *Sept. 2022 - Nov. 2022*
*Hong Kong*

- ○ 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

**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* |