

Yuemin(Austin) Yu

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in Yuemin Yu 🌐 YuyueminAustin

Education

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- 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

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- 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

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- 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

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- 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

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-), Principles of Operating Systems (A)
- AI related: Introduction to Deep learning for computer vision (A+), Machine Learning (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

Peer Mentor of Faculty of Engineering, HKU

Aug. 2023 - present

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

Oct. 2022