

# Win (Sze-Wing) Chan

Portfolio: <https://tinyurl.com/win-chan>

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## EDUCATION

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### Master of Science, Interactive Media Technology

*KTH Royal Institute of Technology*

Aug 2024 – Present

*Stockholm, Sweden*

- Thesis: Visualization of Soundscape in MR for sound source identification and localization
- Supervisors: Andrii Matviienko, Abdallah El Ali, Julian Rasch

### Bachelor of Engineering, Computer Science

*The University of Hong Kong*

2020 – 2024

*Hong Kong*

- Capstone: AR-Driven Exhibition Interaction (*Details in Other Projects section*)
- First Class Honours (top 10% of Bachelor of Engineering student)
- Dean's Honours List 2020-2021

### Short Term Exchange, Sustainability Program

*The University of Sydney*

May – Jul 2022

*Sydney, Australia*

- Attended talks, workshops, and volunteer activities structured around environmental sustainability

## RESEARCH EXPERIENCE

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### Speech and Audio Research Department

*Ericsson, Stockholm, Sweden*

June – Aug 2025

*Summer R&D Internship*

- Focus: Speech Processing Parameter Analysis and Conversion for Codec Interoperability
- Analyzed **speech codec parameter** extraction and conversion between **EVS** (LSF, energy, pitch) and **Opus/FARGAN** (BFCC, pitch) for long-distance speech transmission
- **Reverse-engineered opensource FARGAN vocoder implementation**, identifying implementation-specific features (BFCC band layout, windowing) not detailed in published literature

### SEER Lab

*University of Calgary, Calgary, Canada*

May – Aug 2023

*Mitacs Globalink Research Internship*

- Supervisor: Prof. Frank Maurer
- Focus: Single User Cross Reality Transition of Virtual Object
- Developed a **Unity prototype** for single user cross reality transition of virtual object between desktop screen and the MR space
- Participated in the writing of **2 position papers** for **2023 IEEE International Symposium on Mixed and Augmented (ISMAR) Reality Workshops**. (*Details in Publication section*)
- Set up the **demo room** for showcasing and facilitating XR testing **Varjo XR3** headset

### Culture Computing and Multimodal Information Research Lab (CCMIR)

*The University of Hong Kong, Hong Kong*

Jun – Sep 2022

*Undergraduate Research Assistant*

- Supervisor: Prof. Xiao Hu (now in University of Arizona)
- Focus: Virtual Reality for Cultural Heritage Education
- Developed a **WebVR showcase portal** for the **Learning Analytics enabled Virtual Reality content creation (LAVR) platform**
- Developed the **eye tracking to heatmap function** of **Unity VR prototype** on **HTC Vive**, **conducted and designed user study** for text reading in VR for cultural heritage learning

## PUBLICATIONS

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**S. -W. Chan**, N. Wang and F. Maurer, "Single User Cross Reality Workflow for Reservoir Engineering Work in Progress," 2023 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct), Sydney, Australia, 2023, pp. 211-214, doi: 10.1109/ISMAR-Adjunct60411.2023.00049.

N. Wang, **S. -W. Chan**, D. Aigner, O. Addam, C. Anthes and F. Maurer, "Serious Cross Reality - Using CR to Enhance Analytics Workflow," 2023 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct), Sydney, Australia, 2023, pp. 44-49, doi: 10.1109/ISMAR-Adjunct60411.2023.00017.

## RESEARCH INTEREST

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Multisensory & multimodel XR Interaction  
XR for artistic and cultural context

Ethical considerations in XR & ubicomp  
Critical & socio-technical implications of technology

## TEACHING EXPERIENCE

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### Teaching Assistant – Extended Reality in Theory and Practice (DH2310)

Jan – March 2026

*KTH Royal Institute of Technology, Stockholm, Sweden*

- Provide guidance to students on Unity XR development
- Conduct oral examinations assessing students' understanding of both XR theories and development

### Teaching Assistant – Object-Oriented Programming (COMP2396)

Sep – Nov 2023

*The University of Hong Kong, Hong Kong*

- Assisted in hands-on coding sessions for Java and object-oriented programming concepts

## OTHER PROJECTS

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### Sound of Urban Environment – Today and Future

Unity, Audacity, Sound Interaction, Design Fiction

- An **interactive AR sound installation** that aims to reflect on and re-imagine the **current and future soundscapes of urban environments**

### AR-Driven Exhibit Interaction: A Prototype for Enriched Display

Unity, C#, MRTK, HoloLens 2

- An **interactive AR interface** for **GLAM exhibitions**, designed and conducted user study to evaluate effectiveness

## VOLUNTEERING

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**IEEE VR 2025 Student Volunteer** (Saint-Malo, France)

**ISMAR 2025 Student Volunteer** (Daejeon, Korea)

## TECHNICAL SKILLS

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**Programming Language:** C#, C++, Python, Java, C, MATLAB

**Databases:** MongoDB, MySQL, SQL

**XR Development:** Unity, MRTK, WebVR

**Data Analysis:** Pandas, NumPy, Matplotlib

**XR Devices:** Varjo XR-3, HTC Vive, HoloLens, Meta Quest

**Hardware:** Arduino, Breadboarding, Soldering

**Web Development:** HTML, CSS, JavaScript, ReactJS, NodeJS

**Language:** English, Chinese (Cantonese, Mandarin)