

# Win (Sze-Wing) Chan

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

GitHub: <https://github.com/wincsw>

Email: [win.szewingchan@gmail.com](mailto:win.szewingchan@gmail.com)

LinkedIn: [win-chan](#)

Mobile: +46 761548390

## 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)