Gabriel Hao Wei Yap

https://github.com/Gabriel-Yap

Email : yaphwgabriel04@yonsei.ac.kr

EDUCATION

Yonsei University — Seoul, South Korea
B.S. in Computer Science — *Mar. 2024 –Present*

SMK Kuching High School — Sarawak, Malaysia
Science Stream; SPM(Malaysian Certificate of Education): 6A+ 3A 1A- — *January. 2017 – February. 2022*

AWARDS & SCHOLARSHIPS

- **Computer Science Merit-based Scholarship for International Students**: Yonsei University, Spring 2025
- **Global Basic Education Division (GBED) Merit-based Scholarship**: Yonsei University, Spring 2024
- **Malaysian Federal Scholarship (JPA-JKPJ)**: Nationally-awarded scholarship for elite students to pursue STEM studies overseas.

RESEARCH INTERESTS

- **Computer Vision & Image Processing**: Developing efficient algorithms for compression, segmentation, and content-aware resizing to improve storage, transmission, and analysis of visual data.
- **Human-Computer Interaction (HCI) & User-Centered Systems**: Developing intuitive, accessible interfaces that enhance user experience and engagement across platforms.

EXPERIENCE

HackPPMK25 Innovation Challenge — Seoul, South Korea
Participant — *Aug. 2025*
- **Innovation Challenge**: Collaborated with a team of Malaysian students in South Korea to design and propose technology-driven solutions for real-world problems during an intensive two-week hackathon.

Yonsei International Summer School (YISS) — Seoul, South Korea
Teaching Assistant — *Jun. 2025 – Aug. 2025*
- **Academic Support**: Assisted professors with course delivery, including grading and facilitating discussions, while providing academic mentorship to help international students adapt to Yonsei University.
- **Cross-Cultural Communication**: Fostered cross-cultural communication by working closely with teaching assistants from various cultural backgrounds.

Base Initiative — Online, Malaysia
Volunteer Mentor — *Jun. 2023 – Aug. 2023*
- **Mentorship**: Mentored high-achieving Malaysian high school graduates through scholarship application process, providing expert guidance on essay refinement and interview techniques.

Malaysian Computing Challenge (MCC) — Online, Malaysia
Participant — *Oct. 2022*
- **Computational Thinking Competition**: Participated in an annual online competition to solve algorithmic and logic-based problems within a limited time frame, strengthening problem-solving and computational thinking skills.

EXTRACURRICULAR ACTIVITIES

Yonsei Foreign Student Union (FSU) — Seoul, South Korea
Deputy Vice Commissioner for Administration — *Aug. 2025 – Present*
- **Leadership**: Lead administrative operations and contribute to strategic planning, enhancing team coordination and supporting the execution of events.

Yonsei Foreign Student Union (FSU) — Seoul, South Korea
Operations Team Member — *Aug. 2024 – Dec. 2024*
- **Event Management**: Planned and executed cultural and academic events for international students by coordinating logistics and collaborating effectively within a multicultural team.

- **KYCS Coding Buddy Program** — Kuala Lumpur, Malaysia
  Participant — *Jun. 2023 – Sep. 2023*
  - **Peer Programming Initiative**: Collaborated with fellow CS applicants in a peer programming initiative, developing software projects through bi-weekly progress tracking and documentation.

- **Malaysia Scout Association** — Kuching, Malaysia
  Junior Troop Leader — *Feb. 2022 – Dec. 2022*
  - **Leadership**: Led a junior scout troop, coordinating weekly activities with school administration, and gained international experience by serving on the committee for a large-scale international camp.

PROJECTS

- **Add2Cart Marketplace (Hackathon Project)**

  - Contributed to UX/UI design and frontend development for a student platform using Figma and React, creating intuitive user flows for listings, search, and a multi-language interface.

- **Quadtree Image Compression Project**

  - Engineered a Python-based Quadtree structure and recursive algorithm for lossy image compression by merging similar-colored regions using customizable thresholds.

- **Image Segmentation Project**

  - Developed a Python program that transforms an image into a graph and applies a modified Kruskal's algorithm to segment images by clustering similar pixels.

- **Image Resizing using Data Structures**

  - Engineered iterative and recursive Python algorithms using doubly linked lists to resize images by identifying and removing low-energy seams.

PROGRAMMING LANGUAGES & TOOLS

- Python, C/C++, Java, SQL, JavaScript, HTML, Figma, Git, Linux

LANGUAGES

- **English**: Native (CEFR C1)
- **Chinese**: Native
- **Korean**: Fluent (TOPIK Level 5)
- **Malay**: Fluent