

# Chan Cheuk Ka (陳綽家)

An inquisitive learner and a critical thinker

Phone: +852

<https://cck.wtf>

## EDUCATION

2021 Sep - 2025 Jul

### Bachelor's Degree (HK) - Biomedical Engineering

*The Chinese University of Hong Kong (CUHK)*

★★ First Class Honour (cGPA: 3.579/4.0)

- Dean's list, Faculty of Engineering (2021-2022 & 2022-2023)
- Outstanding Achievement Award Scholarship, BME (2021-2022)
- Specialisation Stream: Molecular, Cell, and Tissue Engineering

2024 Jan - 2024 Jun

### Academic Exchange (UK) - Affiliate: Biochemical Engineering

*University College London (UCL)*

★★ Average: 74.3% (A)

- Inorganic Chemistry for Engineers - (*Quantum orbitals*)
- Biochemistry and Molecular Biology - (*Genetic engineering*)
- Biochemical Engineering Processing and Design - (*Fluid dynamics*)

## PROJECTS

2023 Feb - 2024 Oct

### Antibiotic Resistance Gene Detection Research Project

*International Genetically Engineered Machine (iGEM) Competition 2024*

- *CUHK team: ResiSense*

★★ Gold Medal & Nominated for Best Education Award among 400+ teams in Paris

<https://resisense.github.io>

- Designed a point-of-care kit to detect antibiotic resistance genes in bacteria (superbugs) using RCA and G-quadruplex
- Engineered and measured DNA
- Cultured and transformed bacteria
- Built a web framework and the team website to introduce our project
- Produced, directed, wrote, acted in, edited, and animated promotional and presentation videos
- Interviewed and consulted various experts to gather insights
- Presented at a symposium

2024 Sep - 2025 Apr

### Stem Cell Chondrogenesis Engineering Project

*Biomedical Engineering Final Year Project*

- Cultured stem cells (MSCs) into cartilage tissue under hypoxia and normoxia

2023 Sep - 2023 Dec

### Quadriplegic Computer Input System Course Project

*Medical Instrumentation Design Course*

- Designed and built a computer input system for quadriplegic patients using gyroscope mounted on a pair of goggles
- Averaged 13 words per minute, ranked 1<sup>st</sup> in class

2023 Sep - 2023 Dec

### Brain-Computer Interface Course Project

*Neuroengineering Course*

- Wrote an algorithm to interpret user intent by analysing ECG signals with only 4 probes
- Averaged 40% accuracy given 4 bins, ranked 2<sup>nd</sup> in class

## SKILLS

### Programming skills

<https://cck.wtf/portfolio>

- Web development
- Android app development
- TS/JS
  - Built a web framework
  - Published an NPM package
  - Published an Android app
  - NodeJS / Bun
  - React / React Native
  - Next.js
- HTML/CSS
- C#
- C/C++
- Python

### Design skills

<https://cck.wtf/portfolio>

- Adobe Suite
  - Premiere Pro
  - After Effects
  - Illustrator
  - Photoshop
- Video production
- Graphics design
- Web development
- Android app development
- Blender
- Unity

### Language skills

- Chinese - Native
- English - CEFR: C1/Advanced
- German - Self-learning
- Dutch - Self-learning
- French - Self-learning

## LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

2022 Feb - 2023 Jan

### Biomedical Engineering Society, CUHK

*Secretary & Chung Chi College Representative*

- Managed all internal documents of the society
- Handled all external communications
- Organised numerous academic-focused and student-focused events
- Illustrated **~50% of society materials**, including souvenir, social media promotion posts, and business card
- **Hosted** freshmen orientation day and camp and acted as group “parent”

## TEACHING EXPERIENCES

2022 - 2025

### STEM workshops & booths (Various)

*Workshop Tutor & Booth Design*

<https://cck.wtf/portfolio>

- CUHK × **HKSTP** - InnoCarnival workshop lead, tutor, & mentor (2025) with **400+ participants** in **50+ sessions**
- CUHK × **HKFYG** - InnoCarnival workshop lead (2025) with **30+ participants** in **2 classes**
- CUHK × **HK Science Museum** - Workshop lead, tutor, & kit design (2025) with **100+ participants** in **4 classes**
- CUHK × **ITSC** - AI summer camp workshop lead & design (2025) with **40 participants**
- CUHK × **Primary schools** - Workshop mentor for secondary students (2025) with **50+ participants** in **4 classes**
- CUHK × **MakerSpark** - VEX IQ Robotic workshop tutor (2023-2025) with **25+ classes**
- CUHK × **HKSTP** - VEX IQ Robotic HK Tournamanet panel judge & referee (2023-2025)
- CUHK × **HKSTP** - InnoCarnival booth robotic design (2023), & host (2022-2024)

2025 Mar

### HKDSE Maths Tutor Volunteer Teaching

*CUHK × Tutor Centre Small Class Tutor (10 students)*

## AWARDS

2023 - 2024

### International Genetically Engineered Machine (iGEM) Competition (Gold Medal)

*Hosted by the iGEM Foundation*

2021 - 2022 & 2022 - 2023

### Dean's List Certificate

*Awarded by CUHK: Faculty of Engineering (CUHK FoE)*

2021 - 2022

### Biomedical Engineering Outstanding Achievement Award & Scholarship

*Awarded by CUHK: Department of Biomedical Engineering (CUHK BME)*

2024 - 2025

### Swire Group Staff Hong Kong Scholarship

*Hosted by John Swire & Sons (H.K.) Limited*

2019 - 2020

### Hong Kong Biology Literacy Award (Merit)

*Hosted by the Hong Kong Association for Science and Mathematics Education*

2019

### International Biology Olympiad (IBO) - Hong Kong Contest (Bronze Award)

*Hosted by the International Biology Olympiad e.V. (IBO)*

2019

### Computer App Programming Competition (Bronze Prize)

*Hosted by the Hong Kong Polytechnic University (PolyU)*