



# (Nixon) Yi Heng Cheng

COMPUTER GRAPHICS ENGINEER ·  
TECHNICAL ARTIST

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## SKILLS

**Languages** Rust, C#, WGSL, HLSL, GLSL, Python, Typescript, C++, Dart, Java, PHP, R

**Expertise** Real-time Physics Simulation, Animation, Motion Graphics, Graphics Programming, Parallel/Multithreading, Deep Learning, VFX, Bevy Engine, Unity3D, Unreal Engine

## EXPERIENCE

### Configura

R&D SOFTWARE ENGINEER

- Develop the next generation of CET using flecs, masonry and vello.

Malaysia

July. 2025 - Present

### Rust Malaysia

Co-Host

- Co-host of Rust Malaysia. Help organize events, give talks, mentor, etc.

Malaysia

Nov. 2023 - Present

### 23 Bulbs

COMPUTER GRAPHICS ENGINEER

- Develop GPU accelerated softbody physics engine.
- Tools & pipeline for softbody authoring.
- Craft beautiful visuals with custom rendering pipelines, shaders, etc.

UK

Sep. 2020 - Present

### Hedra

APPRENTICE SOFTWARE ENGINEER

- Create animation systems for generating keyframe animations that can be imported and exported.
- Deal with different types of animation e.g. character rig, blend poses, flame poses, transform, etc.
- All in the Bevy game engine using Rust.

US

Mar. 2024 - Jul. 2024

### APU Game Development Club

HEAD OF EVENTS

- Organize and manage events for the club.

KL, Malaysia

Feb. 2023 - April. 2024

### Fiverr

GRAPHICS PROGRAMMER

- Work on various client projects.

Remote

Jun. 2020 - Aug. 2023

### Streamline Studios

INTERN GAME PROGRAMMER

- Develop Blender addon tools for artists.
- Contributed to Bake n Switch project.

KL, Malaysia

May. 2022 - Aug. 2022

## OPEN SOURCE PROJECTS

### Lumina

<https://github.com/nixon-voxell/lumina>

A top down, fast paced, objective based, PvP game, written in Rust, using the Bevy game engine, with custom global illumination solution and a fully vector graphics rendered UI.

### MotionGfx

<https://github.com/voxell-tech/motiongfx>

Procedural motion graphics creation tool made using Bevy. (Highly inspired by Motion Canvas and Manim)

### Velyst

<https://github.com/voxell-tech/velyst>

Interactive vector-based Typst content creator using Vello and Bevy.

## Boom Boom

<https://github.com/nixon-voxell/boomboom>

A survival bombing game developed entirely using Unity DOTS.

## Bevy Motion Matching

[https://github.com/kahboon0425/bevy\\_motion\\_matching](https://github.com/kahboon0425/bevy_motion_matching)

A machine learning based motion matching animation system.

## Omni Twin

<https://github.com/nixon-voxell/omnitwin>

A digital twin made in Unity for disaster awareness and prediction with custom GPU accelerated flood simulation system.

For a whole list of projects, head to <https://github.com/nixon-voxell> (my GitHub profile) or <https://github.com/voxell-tech> (Voxell GitHub profile) to have a look!

For a whole list of all my games, head on to <https://nixon-voxell.itch.io/> for a look!

## EDUCATION

### Asia Pacific University of Technology & Innovation (APU)

Cumulative GPA: **3.95** / 4.00

BACHELOR OF SCIENCE (HONOURS) IN COMPUTER GAMES DEVELOPMENT

Aug. 2022 - Present

### Asia Pacific University of Technology & Innovation (APU)

Cumulative GPA: **3.80** / 4.00

DIPLOMA IN INFORMATION & COMMUNICATION TECHNOLOGY WITH A SPECIALISM IN SOFTWARE ENGINEERING

Jun. 2020 - Jul. 2022

## AWARDS

Certificates: <https://www.linkedin.com/in/nixonyh/details/honors/>

### MDEC PDTI Outstanding Student Category 2023

Mar. 2024

- 1st Place

### 2023 4th All American DAVINCI International Innovation and Invention Expo

Sep. 2023

- Gold Medal
- ATIP Special Award
- OCIP Special Award
- TISIAS Special Award

### DB-SNUbiz Global Startup Challenge 2023

Sep. 2023

- Finalist

### 2023 INNOVERSE Innovation & Invention Expo

Aug. 2023

- Gold Medal
- INNOPA Special Award
- Canadian Spacial Award of Excellence

### The 12th World Invention Creativity Olympic 2023

Jul. 2023

- Gold Award
- TISIAS Special Award
- TUMMIAD Special Award

### Virtual Innovation Competition 2023

Jun. 2023

- Gold Medal

### 34th International Invention, Innovation & Technology Exhibition

May. 2023

- Silver Medal

### Hilti IT Competition 2023

May. 2023

- Semi-Finalist

## TALKS

### Parallel Programming (Rust Malaysia)

- [https://www.linkedin.com/posts/nixonyh\\_rust-parallel-programming-talkworkshop-april-activity-7187841...](https://www.linkedin.com/posts/nixonyh_rust-parallel-programming-talkworkshop-april-activity-7187841...)

### Beauty of Shaders Talk (APUGDC)

- [https://www.instagram.com/p/Ctfxlu0vD3k/?img\\_index=2](https://www.instagram.com/p/Ctfxlu0vD3k/?img_index=2)

## **TEDx - Simulating Millions of Particles in a Digital Twin (BATxAPU Week)**

- <https://twitter.com/AsiaPacificU/status/1534062323346083840>

## **MEDIA & PRESS RELEASES**

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### **The Star (MDEC PDTI Outstanding Student Category 2023)**

- <https://www.thestar.com.my/news/education/2024/04/28/record-five-mdec-awards-for-apu>

### **The Star (Gold Medal @ Invention Innovation Competition in Canada 2023)**

- <https://www.thestar.com.my/starpics/2023/11/16/next-gen-game-development-for-next-gen-professionals>

### **Open Gov (Gold Medal @ 12th World Invention Creativity Olympic 2023)**

- <https://opengovasia.com/rescueai-smart-city-disaster-management/>

### **APU News (MDEC PDTI Outstanding Student Category 2023)**

- <https://www.apu.edu.my/news/winning-habit-continues-apu>

### **APU News (Gold Medal @ 12th World Invention Creativity Olympic 2023)**

- <https://www.apu.edu.my/news/disaster-management-ai-powered-drone-wins-gold-medal-wico-2023>

### **APU News (1st Runner Up @ Intel AI Global Impact Festival 2023, 3rd Runner Up @ Petronas CHESS Symposium 2023)**

- [https://www.apu.edu.my/news/11-awards-prestigious-research-and-innovation-competitions-apu-students- ...](https://www.apu.edu.my/news/11-awards-prestigious-research-and-innovation-competitions-apu-students-...)

### **APU News (Silver Medal @ ITEX 2023)**

- <https://www.apu.edu.my/news/apu-researchers-and-staff-received-7-awards-innovation-itex-23>