



# (Nixon) Yi Heng Cheng

COMPUTER GRAPHICS ENGINEER ·  
TECHNICAL ARTIST

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## SKILLS

**Programming 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

### Physics Simulation Engineer

23 BULBS

- Develop GPU accelerated cloth simulation engine.
- Tools & pipeline for cloth/softbody authoring.

UK

Sep. 2020 - Present

### Animation Programmer Intern

HEDRA

- 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

### Head of Events

APU GAME DEVELOPMENT CLUB

- Organize and manage events for the club.

KL, Malaysia

Feb. 2023 - April. 2024

### Graphics Programmer

FIVERR

- Work on various client projects.

Remote

Jun. 2020 - Aug. 2023

### Intern Game Programmer

STREAMLINE STUDIOS

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

KL, Malaysia

May. 2022 - Aug. 2022

## EDUCATION

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

BACHELOR OF SCIENCE (HONOURS) IN COMPUTER GAMES DEVELOPMENT

Cumulative GPA: **3.95** / 4.00

Aug. 2022 - Present

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

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

Cumulative GPA: **3.80** / 4.00

Jun. 2020 - Jul. 2022

## OPEN SOURCE PROJECTS

### Bevy MotionGfx

[https://github.com/nixon-voxell/bevy\\_motiongfx](https://github.com/nixon-voxell/bevy_motiongfx)

- Motion graphics creation tool in Bevy. (Highly inspired by Motion Canvas and Manim)

### Bevy Vello Renderer

[https://github.com/nixon-voxell/bevy\\_vello\\_renderer](https://github.com/nixon-voxell/bevy_vello_renderer)

- A minimal integration for rendering vector graphics using Vello in Bevy.

### Unity TTS

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

- Text to speech in Unity.

### Unity NLP

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

- Natural language processing in Unity.

19 SEPTEMBER 2024

## Unity Audio Visualizer

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

- Audio visualizer in Unity using Job System, Burst Compiler, and VFX Graph.

## AWARDS

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

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

Sep. 2023

- Gold Medal
- ATIP Special Award
- OCIIP 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

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

- <https://www.thestar.com.my/starpicks/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 (Gold Medal @ 12th World Invention Creativity Olympic 2023)

- <https://www.apu.edu.my/media/news/2939>

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

- <https://www.apu.edu.my/media/news/2911>

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

- <https://www.apu.edu.my/media/news/2869>