(Nixon) Yi Heng Cheng

COMPUTER GRAPHICS ENGINEER

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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, Deep Learning, VFX, Bevy Engine, Unity3D, Unreal Engine

EXPERIENCE

Physics Simulation Engineer
London, UK

23 BULBS — *Sep. 2020 - Present*
- Develop GPU accelerated cloth simulation engine.
- Tools & pipeline for cloth/softbody authoring.

Head of Events
KL, Malaysia

APU GAME DEVELOPMENT CLUB — *Feb. 2023 - April. 2024*
- Organize and manage events for the club.

Graphics Programmer
Remote

FIVERR — *Jun. 2020 - Aug. 2023*
- Work on vaiours client projects.

Intern Game Programmer
KL, Malaysia

STREAMLINE STUDIOS — *May. 2022 - Aug. 2022*
- Develop Blender addon tools for artists.
- Contributed to Bake n Switch project.

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: **3.95** / 4.00*

DIPLOMA IN INFORMATION & COMMUNICATION TECHNOLOGY WITH A SPECIALISM IN SOFTWARE ENGINEERING — *Jun. 2020 - Jul. 2022*

PROJECTS

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
- A minimal integration for rendering Vello graphics in Bevy.

Unity TTS
https://github.com/voxell-tech/UnityTTS
- Text to speech in Unity.

Unity NLP
https://github.com/voxell-tech/UnityNLP
- Natural language processing in Unity.

Unity Audio Visualizer
https://github.com/voxell-tech/UnityAudioVisualizer
- Audio visualizer in Unity using Job System, Burst Compiler, and VFX Graph.

AWARDS

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

Beauty of Shaders Talk (APUGDC)

- https://www.instagram.com/p/CtfxIu0vD3k/?img_index=2

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

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

MEDIA & PRESS RELEASES

The Star (Rescue AI - 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 (Rescue AI - Gold Medal @ 12th World Invention Creativity Olympic 2023)

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

APU News (Rescue AI - 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