(Nixon) Yi Heng Cheng

GRAPHICS ENGINEER · TECHNICAL ARTIST

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📍 Malaysia

in nixonyh

🔗 linktr.ee/voxell

nixon-voxell

▶ @voxelltech

nixon-voxell

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
Malaysia

R&D SOFTWARE ENGINEER — *July. 2025 - Present*

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

Rust Malaysia
Malaysia

CO-HOST — *Nov. 2023 - Present*

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

23 Bulbs
UK

GRAPHICS ENGINEER — *Sep. 2020 - Present*

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

Hedra
US

APPRENTICE SOFTWARE ENGINEER — *Mar. 2024 - Jul. 2024*

- 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.

APU Game Development Club
KL, Malaysia

HEAD OF EVENTS — *Feb. 2023 - April. 2024*

- Organize and manage events for the club.

Fiverr
Remote

GRAPHICS PROGRAMMER — *Jun. 2020 - Aug. 2023*

- Work on various client projects.

Streamline Studios
KL, Malaysia

INTERN GAME PROGRAMMER — *May. 2022 - Aug. 2022*

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

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

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
• 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

Parallel Programming (Rust Malaysia)
• https://www.linkedin.com/posts/nixonyh_rust-parallel-programming-talkworkshop-april-activity-7187841 …

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 (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/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 (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- …

APU News (Silver Medal @ ITEX 2023)
• https://www.apu.edu.my/news/apu-researchers-and-staff-received-7-awards-innovation-itex-23