

LIN, Guan-Cherng (Roger)

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EDUCATION

New York University Tandon School of Engineering

MS in Computer Science

New York, United State

Sept. 2023- PRESENT

The Hong Kong University of Science and Technology

BEng in Computer Science *Second Class Honors, Division I, November 2021*

Kowloon, Hong Kong

Sept. 2017- Nov. 2021

SKILLS

- **Computer Graphics/Games:** OpenGL, GLSL, Unity, Blender, GameMaker, Maya, Substance Painter, Photoshop
- **Programming:**
 - Proficient: C/C++, Python/Flask, HTML/CSS/JavaScript
 - Intermediate: Java, SQL, Lisp, Julia
- **DevOps:** Git, Linux, Wireshark, UiPath (RPA), PowerBI
- **Certificates:** Introduction to VR [[Coursera](#)], Complete Guide to Maya 2024 [[Udemy](#)], Google Analytic [[Google](#)]

EXPERIENCES

Game Innovation Lab at NYU

Feb. 2025- PRESENT

Research Assistant

New York, United State

- Researched visual data processing, optimizing iris recognition for improved biometric identification accuracy.

Institute for Information Industry (III)

June 2022- PRESENT

Summer Intern / Industry Control System Security Engineer (Trainee)

Taipei, Taiwan (Remote)

- Developed [Whosspeak - Industrial Control System Cybersecurity Analytic Platform](#), a cybersecurity application with the ICS Security Team aimed at detecting and mitigating network anomalies in OT systems.
- Received the [2023 R&D 100 Awards](#) for its contribution to security. Adopted by 10+ organizations in Taiwan to enhance cybersecurity by detecting network anomalies, building malicious behavior models aligned with the MITRE ATT&CK ICS framework, and strengthening technical defenses to safeguard enterprise systems.
- Analyzed 10+ malicious protocols in OT systems, presenting strategies for detection, by conducting in-depth research of internet protocols, capturing and inspecting thousands of raw networking packets using Wireshark.

Taiwan Semiconductor Manufacturing Company (TSMC)

July 2020- Sept. 2020

Summer RD Intern at Infrastructure Communication Service Department (ICSD)

Taipei, Taiwan

- Designed and implemented 3 Robotic Process Automation (RPA) scripts and automated email reminders using UiPath and HTML, supporting colleagues in server management and semiconductor manufacturing product lines.
- Enhanced cybersecurity by facilitating technicians in monitoring product-line status, enabling 24/7 automated server monitoring with PowerBI, ensuring up-to-date OS and antivirus to reduce cyber-attack risk.

PROJECTS

3D Animations for Games / Fire Dragon Cinematic at NYU Tandon [[artstation](#)]

Feb. 2025- May. 2025

- Directed and delivered a cinematic Red Dragon animation in Unity within one week, handling 3D modeling in Blender, texturing in Substance, animation, and environment design to demonstrate strong storytelling, technical skills, camera work, and full game animation pipeline experience.

Web-Based Computer Games Design at NYU Tandon [[itch.io](#)]

Sept. 2024- Dec. 2024

- Developed six web-based game prototypes and a big project game exploring key elements of mechanics and design using Unity and GameMaker. Each prototype was completed in a week, focusing on aspects such as Procedural Content Generation, Level Design, Resource Management Systems, Game Feel, Minimalism, etc.

Virtual Reality Interactive Music Museum at NYU Tandon [[webpage](#)]

Sept. 2024- Dec. 2024

- Developed a VR Interactive Museum using Unity, showcasing Baroque music and art, with a focus on enhancing immersive interactions and delivering an engaging user experience. Features include interactive exhibits with composer biographies, videos, artwork descriptions, virtual performance hall, and interactive learning space.
- Optimized visual and audio performance by implementing techniques such as global illumination, level of detail (LOD), and occlusion culling, ensuring seamless integration of Google Cardboard SDK for mobile applications.

PathAdvisor 2.0: Smart Mobility and Navigation in HKUST Campus at HKUST [[webpage](#)]

June 2020- June 2021

- Enhanced PathAdvisor indoor localization app at HKUST. Improved precise positioning and data maintenance efficiency by implementing fingerprint and signal-fusion techniques and developing a smart maintenance system.
- Established a dedicated server for indoor localization and automated fingerprint updates, enhancing accuracy by 20% and streamlined maintenance processes, reducing bi-monthly site survey time from 2 weeks to a few days.

The Witch's Hunter (2D RPG Action Game) at HKUST [[repo w/ built exe](#)]

Feb. 2021- June 2021

- Conceptualized and designed the game world, narrative arcs, storylines, levels, features, game levels, and scenarios. Collaborated in the development of a 2D platform action game using Unity and C.
- Constructed core systems and mechanisms including UI, controls, skill tree, AI, object spawning, game flow, etc.

Other Personal Projects

Official Web of University Choir HKUST [[Link](#)] | Big Data Project for Taxi Pickup [[Link](#)] | Blender Self-practice [[Link](#)]