LIN, Guan-Cherng (Roger)

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EDUCATION

New York University Tandon School of Engineering   **New York, United State**
MS in Computer Science   **Sept. 2023- PRESENT**
The Hong Kong University of Science and Technology   **Kowloon, Hong Kong**
BEng in Computer Science *Second Class Honors, Division I, November 2021* **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 levels by facilitating technicians in monitoring production machine status, ensuring up-to-date OS versions and antivirus applications, using PowerBI.
- Won 4th place among all 2020 summer interns by presenting RPA solutions for reducing the risk of cyber-attacks and transitioning labor-intensive server management to 24/7 automation in the final project presentation.

PROJECTS

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 controlling object systems and game mechanisms, including designing UI, key bind, skill tree, simple AI to handle different hierarchies, random spawning objects, scenes, backgrounds, and the flow of the game.

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