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**
- Courses: Artificial Intelligence, Big Data, Design & Analysis of Algorithms, Interactive Computer Graphic

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**
- Courses: Computer Graphic, Computer Game Design, HCI, Machine Learning, Multimedia Computing, Database, Software Engineering, Operating System, Algorithms, Programming and Data Structures.

SKILLS

Programming: (Proficient) C/C++, Python, HTML/CSS/JavaScript; (Intermediate) Java, SQL, Lisp, Julia
System/ Tools: Git, Linux, Hadoop/Spark, Unity, Blender, Maya, UiPath, Google Analytics, Wireshark, Photoshop
Framework: Flask, Robotic Process Automation (RPA)

PROFESSIONAL EXPERIENCE

Institute for Information Industry (III)   **Taipei, Taiwan**
Summer Intern / Industry Control System Security Engineer (Trainee)   **June 2022- PRESENT**
- Developed WhoSpeaks, a cybersecurity application with the ICS Security Team aimed at detecting and mitigating network anomalies in OT systems. Nominated for the 2023 R&D 100 Awards for its contribution to security.
- Conducted in-depth research of internet protocols with Wireshark by capturing and inspecting thousands of raw networking packets. Analyzed over 10 malicious protocols in OT systems, presenting strategies for detection.
- Secured 3rd place in final project presentation by presenting the effective strategies for identifying malicious protocols, contributing to the development of the OT Security Testing Framework and Industrial Cyber Threat Detector (ICTD) in the team.

Taiwan Semiconductor Manufacturing Company (TSMC)   **Taipei, Taiwan**
Summer RD Intern at Infrastructure Communication Service Department (ICSD)   **July 2020- Sept. 2020**
- 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 collaborating with Power BI to facilitate technicians in monitoring production machine status, ensuring up-to-date OS versions and antivirus applications.
- 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

Computer Game Design at NYU Tandon   **Sept. 2024- Dec. 2024**
- Developed six web-based computer games exploring key elements of mechanics and design with Unity and GameMaker. Each project was completed in a week, focusing on distinct aspects such as Procedural Content Generation, Level Design, Resource Management Systems, Game Feel, Minimalism, etc. [[itch.io](#)]

PathAdvisor 2.0: Smart Mobility and Navigation in HKUST Campus at HKUST   **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) in Game Programming at HKUST   **Feb. 2021- June 2021**
- Conceptualized and designed the game world, narrative arcs, storylines, levels, features, game levels and difficulties, 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.

ACTVITIES & CERTIFICATES

- Online Certificates: Introduction to VR [[Coursera](#)], Google Analytic [[Google](#)]
- IT Security of The University Choir, HKUST Student Union   Feb. 2019- Feb. 2020
- Engineering Student Ambassador of HKUST, School of Engineering   Mar. 2020- May 2022
- Overseas International Ambassador of Skyline, An Intl. Opportunities Platform in Taiwan   Aug. 2020- Aug. 2021

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