

# CURRICULUM VITAE



**Name:** Haotian Chen (Chahot)

**Nationality:** China

**Languages:** Chinese (Native), Korean (Fluent), English (Intermediate)

**Foreign Language:**

- **Korean:** TOPIK Level 6 (Highest Level)
- **English:** Proficient in English for everyday communication, though without formal certification.

**Current Residence:** Singapore

**Email:** a670627525@gmail.com

**Phone:** +86 131 5317 4783

## Objective

One Ph.D. candidate position in the field of quantum security (Cyber Security).

## Professional Summary

I am a Research Assistant at the Centre for Quantum Technologies at the National University of Singapore, where I am privileged to work under the mentorship of Prof. Divesh Aggarwal. With a strong foundation in cybersecurity, IoT, and quantum security, I am a highly motivated and detail-oriented researcher dedicated to advancing the field of quantum security. My journey began with a broad exploration of cybersecurity before narrowing my focus on quantum security as my primary research interest. Along the way, I gained foundational insights into blockchain, digital twins, the metaverse, and smart cities. Previously, I pursued a PhD at Seoul National University of Science and Technology, South Korea. Seeking a more specialized and professional trajectory in quantum security, I made the strategic decision to withdraw the PhD program, a choice that ultimately led me to CQT at NUS.

## Education

• **Ph. D. Candidate** in Computer Science and Engineering (2021.09 – 2023.11) (**GPA = 4.27/4.50, 97.4/100**) at Seoul National University of Science and Technology (SeoulTech), Seoul, Rep. of Korea. (Withdrawn)

- *Specialization:* Quantum-based Cybersecurity in IoT

- *Tentative Thesis:* “A Smart Contract and Digital Twin-based Heuristic Multi-Cooperation Scheduling Framework for Smart Manufacturing in IIoT Environments”

• **B.Sc.** in Computer Science and Engineering (2017.03 – 2021.08) (**GPA = 3.64/4.50, 90.2/100**) at Seoul National University of Science and Technology (SeoulTech), Seoul, Rep. of Korea [Took a semester off because of the covid situation.]

- *Specialization:* Computer Science and Engineering, Fall 2021 Graduate Rankings: 10th

- *Graduation Design & Thesis:* “Servers—Client Mini-Network Security Prototype Based on VMWare and GNS3”

## Research Experience

- Ph.D. Research Student (2020.08 – 2023.11) at Seoultech, Seoul, Rep. of Korea
  - Blockchain research & publication (self-taught)
  - Study Cryptography with focus on Homomorphic Cryptography and Secure-Multiparty Computation for privacy protection
  - Hands on experience in Qiskit and IBM
  - Studied DT basics (self-taught) and deployed it in one of my published papers.
  - Participated in writing cybersecurity report for the current trends and challenges for korean ministry of defense.
- Published work:
  1. Leveraging Application Permissions for Android Ransomware Detection: Deep Reinforcement Learning Approach, *Journal of Network and Computer Applications* (ISSN 1084-8045, Impact Factor: 7.7, JCR Q1 Top 4.2%) (Ack: NRF - RS-2023-00267476), 2024
  2. A Comprehensive Study of Quantum Computing Technologies in Smart City: Review and Future Directions, *Human-centric Computing and Information Sciences* (ISSN 1389-1286, Impact Factor: 3.9, JCR Q2 Top 26.3%) (Ack: NRF - RS-2023-00267476), 2024
  3. A Digital Twin-Based Heuristic Multi-Cooperation Scheduling Framework for Smart Manufacturing in IIoT Environment, *Applied Science* (EISSN 2076-3417, Impact Factor: 2.5, JCR Q2 Top 24.3%) (Ack: NRF-2019M3F2A1073386), 2023
  4. A Novel Smart Contract based Optimized Cloud Selection Framework for Efficient Multi-Party Computation., *Journal of Information Processing Systems*, (EISSN 2092-805X, Impact Factor: 1.6, Scopus), 2023
  5. Blockchain-Based Distributed Information Hiding Framework for Data Privacy Preserving in Medical Supply Chain Systems., *Sensors*, (EISSN 1424-8220, Impact Factor: 3.4, JCR Q2 Top 30.9%) (Ack:NRF-2019R1A2B5B0107041613 & UD210029TD), 2022
- Participated in research projects (2021.09 – 2023.11) at Seoultech, Seoul, Rep. of Korea
  - Blockchain-Based Delegated Quantum Computing for Secure Industrial IoT Network Communication
  - Development of Secure and Efficient Cybersecurity Attack Response Technologies Using Quantum Machine Learning for Sustainable Wired and Wireless Communication Network Services
  - Research on Countering Stealthy Penetration Attacks
  - Real-Time Face De-identification Technology Enabling Same-Subject Linkage Analysis in Facial Recognition CCTV
  - Research on Smart City Network Architecture in a Deep Learning-Based Blockchain Distributed Environment

## Professional Experience

- Technical Blog Experience (2019 – Present) at Alibaba Cloud Developer Community and CSDN, China. Subscriptions more than 20,000 and total number of visits is about 600,000.

Access Link: <https://chahot.blog.csdn.net/>

- *Alibaba Cloud Developer Community-Blogging Expert*: May, 2023
- *CSDN-Blogging Expert*: March, 2023
- *CSDN-Quality creator in the field of Cybersecurity*: June, 2022
- Examiner for the security section of the Korean Information Processing Technology Professional Certification Examination
- Book Publication: [Quantum Security: A New Era in Information Protection.] Published with the PHEI (Publishing House of Electronics Industry, the 4th-ranked publisher in the field of Chinese technology books), July 2024

## Awards and Recognitions

- Scholarships
  - Received the university's "Scholarship for Outstanding Achievement for Foreigners" for each semester of my undergraduate studies (4 full scholarships and 4 half scholarships).
  - Received the university's "Scholarship for Outstanding Achievement for Foreigners" for each semester of my graduate studies (75% scholarships).
  - Received several Teaching Assistantship, Conference Grants, Journal Publication Incentives
- Best Paper Award in International Conference
  - The 13th International Conference on Computer Science and its Applications, Jeju, Korea, 2021
  - The 2022 World Congress on Information Technology Applications and Services Jeju, Korea, 2022
  - The 2023 International Conference on Big data, IoT, and Cloud computing, Jeju, Korea, 2023
- Recognitions in Technical Blog
  - *Alibaba Cloud Developer Community-Blogging Expert*: May, 2023
  - *CSDN-Blogging Expert*: March, 2023

## Technical Skills

- Communication Systems
- Coding and applications: Qiskit, Python, Java, some C++
- Operating Systems: Windows
- Research Tools: OpenAI, Consensus, ChatPDF, Web of Science, Scopus, Google Scholar

- Software Tools: Docker, Wireshark, Nmap, Jupyter-Notebooks, GSN3, VMWare

### **Soft Skills**

- Strong research and analytical abilities
- Detail-oriented and meticulous
- Capacity for sustained independent work
- Good communication and collaboration skills
- Perseverance and determination
- Passion for continuous learning and self-improvement
- Effective problem-solving skills
- Strong work ethic and dedication to quality
- Supportive and collaborative team player

### **References**

- Divesh Aggarwal(devish@gmail.com), Associate Professor, School of Computing&Centre for Quantum Technologies, National University of Singapore, Singapore
- Jong Hyuk Park(jhpark1@seoultech.ac.kr), Professor, Department of Computer Science and Engineering, Seoul National University of Science and Technology, South Korea
- Dr. Qingming Zhao (Zqmzhao2009@sina.com). Former Deputy Director of the Research Institute of the China Financial Futures Exchange, Chief Economist in China, China
- Prof. Wenting Wei(wtwei@xidian.edu.cn), Associate Professor, School of Communication Engineering, Xidian University, China