# Yu-Chung Cheng

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 sunnyanthony

## Objective & Summary

Motivated and skilled software engineer aspiring to pursue a Ph.D. in Computer Science at Virginia Tech, with a focus on deep learning. Currently advancing in a Master's program in Computer Science at VT, I have a rich professional background in AIoT, Cloud Systems, and Multimedia Frameworks, highlighted by developing real-time object detection systems and managing scalable cloud services in the industry. Additionally, my independent research during my previous Master's at National Tsing Hua University, focusing on "Performance Improvement of OpenFlow Switch with Queue and Per-port Cache" under Prof. Youn-Long Lin, demonstrates my ability to undertake in-depth and innovative studies. This combination of practical work and academic research creates a strong foundation for my deep learning research ambitions. Actively seeking a Ph.D. advisor, I am ready to transition into a doctoral program and make innovative contributions to the field of AI.

## Education

**Virginia Tech**                                                                                        **Blacksburg, VA**
*MEng in Computer Science, Data and AI concentration*                                          *2023–Present*
Completed Courses: Advanced Machine Learning, Introduction to Deep Learning, Data Analytics
Courses Currently Undertaken: Learning-based Computer Vision, Information Retrieval, Introduction to Artificial Intelligence

**National Tsing Hua University**                                                                    **Hsinchu, Taiwan**
*M.S. in Computer Science, Network Optimization*                                                  *2014–2017*
**Thesis** (Advisor: Prof. Youn-Long Lin): Performance Improvement of OpenFlow Switch with Queue and Per-port Cache

## Research Experience

**2014–2017**:   **Research Assistant, National Tsing Hua University**: Conducted research on performance improvement of OpenFlow switches, focusing on queue and per-port cache optimizations. Explored virtualization technologies, heterogeneous computing, and algorithms in software-defined networking, under the guidance of Prof. Youn-Long Lin.

## Academic Experiences

**National Tsing Hua University**
*Teaching Assistant*

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|---|---|
| *Digital Logic Design* | *2015* |
| *Programming Top Ten Important Algorithms in Python* | *2016* |

**Virginia Tech**
*Project*

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|---|---|
| *Text Prompting in Generative AI* | *2023* |
| *Text Prompting in Generative AI* | *2023* |
| *Cloud Data Computing with Neon* | *2023* |
| *Data Infrastructure Team Leadership* | *Present* |
| *ReIdGAN for Object Tracking* | *Present* |
| *Maskgit for Image Generation* | *Present* |

## Professional Experience

**Deep Sentinel Inc.**                                                    **Pleasanton, CA/Taipei**
*Senior Software Engineer*                                            *March 2021 - November 2022*
- Developed a real-time object detection system with our pre-trained model, enhancing system performance.
- Pioneered cloud-based microservices on GCP, focusing on scalable infrastructure conducive to machine learning applications.
- Optimized data storage and retrieval processes, critical for efficient training and deployment of large-scale AI models.

**RealTek Inc.**                                                                             **Taipei**
*Senior Software Engineer*                                            *September 2020 - March 2021*
- Designed a memory-efficient key-value database for power management storage.
- Mentored new engineers in systems engineering and best practices.

**RealTek Inc.**                                                                             **Taipei**
*Software Engineer*                                                    *April 2017 - September 2020*
- Enhanced networking performance and memory management in embedded systems.
- Developed a cross-OS message communication interface to streamline device interactions.
- Optimized toolchain to achieve lower memory utilization

## Technical Skills

- Programming Languages: Python, C, C++, Rust, Java, Javascript, Lua, Scala
- Deep Learning Frameworks: Pytorch, TensorFlow
- Technologies: CUDA, Docker, Kubernetes, Grafana, Git, Redis, OpenCV, Postgres, MySQL, ELK, Kafka, IoT protocols, DTLS/TLS, SDN, WebRTC, Distributed System