

Resume

Name	Yan-Wei Chen																																					
Birth	1996 / 04 / 03																																					
E-mail	ghj0504520.cywjy@gmail.com																																					
Education	<ul style="list-style-type: none"> - Ph.D Candidate in Institute of Computer Science and Engineering, Department of Computer Science, National Yang Ming Chiao Tung University (2023-) - M.S. in Institute of Computer Science and Engineering, Department of Computer Science, National Chiao Tung University (2018-2020) - B.S. in Department of Computer Science and Engineering, National Sun Yat-sen University (2014-2018) - National Tainan First Senior High School (2011-2014) 																																					
Military Service	Police Substitute Services - Safety Maintenance, Aviation Police Bureau (Taiwan Taoyuan International Airport, Dec. 2020 - Jun. 2021)																																					
Achievement of Master	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Semester</th> <th>Credit Taken</th> <th>Credit Actually Gets</th> <th>GPA</th> </tr> </thead> <tbody> <tr> <td>107-1</td> <td>10.00</td> <td>10.00</td> <td>4.30</td> </tr> <tr> <td>107-2</td> <td>7.00</td> <td>7.00</td> <td>4.15</td> </tr> <tr> <td>108-1</td> <td>7.00</td> <td>7.00</td> <td>4.15</td> </tr> <tr> <td>108-2</td> <td>1.00</td> <td>1.00</td> <td>Pass</td> </tr> <tr> <td colspan="4" style="height: 20px;"></td></tr> <tr> <td colspan="2" style="text-align: center;">Coursework Average</td><td style="text-align: center;">4.21</td><td style="text-align: center;">Thesis</td><td style="text-align: center;">4.3</td></tr> <tr> <td colspan="3" style="text-align: center;">GPA</td><td colspan="2" style="text-align: center;">4.25 (Overall 4.3)</td></tr> </tbody> </table>				Semester	Credit Taken	Credit Actually Gets	GPA	107-1	10.00	10.00	4.30	107-2	7.00	7.00	4.15	108-1	7.00	7.00	4.15	108-2	1.00	1.00	Pass					Coursework Average		4.21	Thesis	4.3	GPA			4.25 (Overall 4.3)	
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Achievement of Ph.D Program	Semester	Credit Taken	Credit Actually Gets	GPA
	112-1	9.00	9.00	4.3
	112-2	7.00	7.00	4.3
	113-1	7.00	7.00	
Professional Skills	Programming and Programming Language	C/C++, Raw Socket, JAVA, Python, BASH, Reinforcement Learning Github: https://github.com/ghj0504520?tab=repositories		
	Software-Defined Networking (SDN) & 5G	Mininet, ONOS, OpenFlow, P4, UPF, SMF, PFCP, GTP		
	Network Management	Switch Management (Legacy/OpenFlow/P4, L2 Vlan), Linux System (Ubuntu), Docker, DHCP, AAA		
Language Certificate/ Examination /Licence	English: TOEIC (900, 2021), TOEFL-iBT (97, 2024) Japanese: JLPT (N2, 2021) Civil Service Special Examination for Civil Aviation Personnel (Acceptance, 2022)			

Experience	<p>1. Campus Dorm-Net Promotion Association (CDPA), NSYSU</p> <ul style="list-style-type: none"> - Director (2017/02 - 2017/09) - Secretary of Curriculum (2016/02 - 2017-01) - Network Manager (2016/02 - 2017/09) <p>2. SDN and P4 Testbed Network Manager, NCTU</p> <ul style="list-style-type: none"> - Management of P4 Switches and Servers with several P4 scenarios. - ONOS Application Usage: OpenFlow SDN-IP, OpenFlow Virtual-Router, OpenFlow SegmentRouting, ONOS Basic.p4, ONOS Fabric.p4, P4 SegmentRouting. <p>3. ONF NCTU P4 Brigade Day, Open Networking Foundation (ONF), MENLO PARK, CA, Oct. 2018</p> <ul style="list-style-type: none"> - About two weeks of internship in ONF, I learned about ONOS and contributed to the ONOS project. <p>4. APNOMS2019, Matsue, Japan, Sept. 2019.</p> <ul style="list-style-type: none"> - I published a paper about QoS bandwidth management of UDP traffic with P4 programmable switch - "<i>P4-enabled bandwidth management</i>" and got the "<i>Best Student Paper Award</i>". <p>5. Project Research Assistant, NYCU (2021/07 - 2021/09)</p> <ul style="list-style-type: none"> - I conducted research about PDU session related procedures of 5G and surveyed 5G related specifications, then I implemented the UP security mechanism of free5GC. <p>6. Software Engineer, ATAYALAN, Taipei, Taiwan (2021/10 - 2022/07)</p> <ul style="list-style-type: none"> - I worked on the 5G core network development with WIFI integration. - I dealt with performance improvement of the 5G data plane network function - UPF.
Publication/ Patent	<p>1. <u>Yan-Wei Chen</u>, Li-Hsing Yen, Wei-Cheng Wang, Cheng-An Chuang, Yu-Shen Liu, and Chien-Chao Tseng, "P4-enabled bandwidth management," The 20th Asia-Pacific Network Operations and Management Symp. (APNOMS), Matsue, Japan, Sept. 2019. Url: https://doi.org/10.23919/APNOMS.2019.8892909</p> <p>2. <u>Yan-Wei Chen</u>, Chi-Yu Li, Chien-Chao Tseng, Min-Zhi Hu, "P4-TINS: P4-driven Traffic Isolation for Network Slicing with Bandwidth Guarantee and Management," IEEE Transactions on Network and Service Management (TNSM), Early Access, 2022. Url: https://doi.org/10.1109/TNSM.2022.3159232</p> <p>3. Tseng, C-C., Chen, Y-W., Chien, H-T., "A BANDWIDTH MANAGEMENT SYSTEM WITH TWO-LEVEL PRIORITY," TW Patent No. I 766558, 1 Jun 2022.</p> <p>4. R. Pazhyannur, C. H. LIN, Y. W. CHEN, and L. F. Chang, "Universal gateway for policy-aware traffic forwarding for multiple types of network traffic," U.S. Patent Application Publication No. US 2023/0396557 A1, 7 Dec. 2023.</p> <p>5. I-Ting Ho, Li-Hsing Yen, and Yan-Wei Chen, "CNN inference workload distribution considering accumulative effect of receptive fields," International Computer Symposium (ICS 2024), Taipei, Taiwan, Oct. 2024.</p>

	<p>6. Shao-Chun Huang, Li-Hsing Yen, and Yan-Wei Chen, "DRL-based UAV serving and charging scheduling for autonomous service provisioning," The 39th Int'l Conf. on Information Networking (ICOIN), Chiang Mai, Thailand, Jan. 2025.</p> <p>7. Yung-Lun Yang, Yan-Wei Chen, and Li-Hsing Yen, "Joint carbon-latency optimization for online service function chain deployment," Proc. IEEE Globecom, Taipei, Taiwan, Dec. 2025.</p>
Open Source Contribution	<p>1. ONOS (https://github.com/opennetworkinglab/onos)</p> <ul style="list-style-type: none"> - I implemented a new feature of the PI driver in ONOS, and I also fixed two existing issues. I submitted these commits to the developers of ONOS, and they accepted all commits. <p>2. free5GC (https://github.com/free5gc/free5gc)</p> <ul style="list-style-type: none"> - I implemented the UP security mechanism of free5GC, and I contributed some code to SMF and Webconsole of free5GC.
Master's Thesis	<p>P4-TINS: P4-driven Traffic Isolation for Network Slicing with Flow-based Bandwidth Guarantee and Management (Advisor: Chien-Chao Tseng, Chi-Yu Li)</p> <ul style="list-style-type: none"> - The research is about QoS and traffic engineering in the programmable switch. I experimentally discover two major issues of the bandwidth management with network slicing support on P4-based meter classification and traffic steering. The first is that TCP flow fails to achieve guaranteed bandwidth. The second is that traffic contention between different flow types/sizes. Therefore, I design P4-TINS that well supports network slicing with flow-based bandwidth guarantee on various flow types/sizes and practical residual bandwidth sharing. Moreover, I confirm that the effectiveness of P4-TINS on commodity P4 programmable switches with various traffic flows and slicing scenarios.