

Zi-Chao Lin

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EDUCATION

- **National Chengchi University (NCCU)** Taipei, Taiwan
Bachelor of Science in Computer Science Sep.2015 - Jun.2019
 - **Overall GPA:** 4.17/4.30 (3.93/4.00) ◦ **Major GPA:** 4.26/4.30 (4.00/4.00)
 - **GPA for the last 60 credits:** 4.21/4.30 (3.95/4.00)
 - **Ranking:** 1/46
 - **Relevant courses:** Computer Programming I (A+), Java Programming (A+), Data Structures (A+), Discrete Mathematics (A+), Computer Architecture and Organization (A+), Operating System (A+), Programming Languages (A+), Data Science (A+)

HONORS AND AWARDS

- **Academic Excellence Award, NCCU** Jan.2016, Jun.2016, Jan.2017, Jun.2017, Jun.2018
 - Awarded to the top 3 undergraduate students in a department per semester for excellent academic performance
- **Department of Computer Science Senior Project Contest 2018, NCCU** Dec.2018
 - Received honorable mention among all computer science students
- **Scholarship of Lungshan Temple** Nov.2018
 - Awarded to college students in Taipei (only 31 students in NCCU) for excellent academic performance, with sponsorship for about 330 U.S. dollars per student
- **Programming Contest of Special Interest Group Programming 2018, NCCU** May.2018
 - Won the first prize among 27 participants (9 groups)

PUBLICATIONS

- **Oral Presentation**
 - **Zi-Chao Lin** and Chun-Feng Liao, "ICMPv6SD: A Compact Service Discovery Protocol Supporting Plug-and-Play in Home Networks," in Proc. International Conference on Platform Technology and Service (PlatCon'19), Jeju, Korea, 2019. [[paper](#)] [[slides](#)]
 - Presented the enhanced design built on top of the results reported in the TCSE paper
 - Detailed a new compression mechanism, improved protocol, and rigorous evaluation
 - **Zi-Chao Lin** and Chun-Feng Liao, "A Lightweight Plug-and-Play Home Service Management Scheme based on ICMPv6," in Taiwan Conference on Software Engineering (TCSE), Tainan, Taiwan, 2018. (In Chinese)
 - Proposed a preliminary internet protocol that could reduce the network traffic in home networks

WORK EXPERIENCES

- **Microsoft, AI R&D Center** Taipei, Taiwan
Research and Development Intern Jun.2018 - Present
 - **Bing Maps:** Bing Maps is a web service for users to find locations and places.
 - Designed a new data pipeline for data centers to improve their reliability (XML)
 - Replaced the threshold-based approach with machine learning models for improving the quality of Bing Maps answers (Python/C#)
 - Ran A/B testing for analyzing models and provided better accuracy and relevance in Bing Maps answers
- **National Chengchi University** Taipei, Taiwan
Undergraduate Research Assistant and Teaching Assistant
 - **Undergraduate Research Assistant, NCCU Blockchain Group** Jan.2019 - Sep.2019
 - Advisor: Prof. Kung Chen
 - Modified the smart contracts for experiments and surveyed the performance of Ethereum JavaScript API
 - Developed a prototype for testing blockchain environment and added user interfaces for real-time debugging

- **Undergraduate Research Assistant, Software Engineering Laboratory** Jan.2018 - Jan.2019
 - Advisor: Prof. Chun-Feng Liao
 - Surveyed internet protocols for sensor nodes in home networks, including ICMPv6 and MQTT-SN
 - Implemented a Lua-based plugin on Wireshark for network monitoring
- **Teaching Assistant, Object-Oriented Programming** Sep.2018 - Jan.2019
 - Instructor: Prof. Tsai-Yen Li
 - Taught different aspects of Object-Oriented Programming using C++ in TA office hours every week
 - Prepared class materials and graded homework
- **Teaching Assistant, Programming 101** Feb.2018 - Jun.2018
 - Instructor: Prof. Jhe-Wei Lin
 - Taught the basic syntax of Python and advised on final projects during TA office hours
 - Facilitated and managed about one hundred students
- **Academia Sinica** Taipei, Taiwan
 - Summer Intern Jul.2018 - Aug.2018
 - **Computational Finance and Data Analytics Laboratory**
 - Advisor: Prof. Chuan-Ju Wang
 - Built a music recommender system using KKBOX datasets and Item Concept Embedding (Python/Javascript)
 - Developed a web system by Node.js to demonstrate recommended results
- **Galaxy Software Services** Taipei, Taiwan
 - Software Engineer Intern Jul.2017 - Jan.2018
 - **Financial Business Department**
 - Built internal systems and web applications using the Model-View-Controller pattern (Visual Basic/C#)
 - Maintained and modified database schema to satisfy the normalization in light of the requirements of banks (SQL)

COURSE PROJECTS

- **Data Science** Feb.2019 - Jun.2019
 - Instructor: Prof. Jia-Ming Chang
 - **Web Application for Data Visualization:** Built a Shiny application for data visualization by R
 - Designed intuitive and efficient user interface and deployed to shinyapps.io
- **Introduction to Software Engineering** Feb.2018 - Jun.2018
 - Instructor: Prof. Chun-Feng Liao
 - **iCourse:** Implemented a system for course selection with real course information in NCCU using Ruby on Rails framework and performed unit tests with RSpec
- **3D game programming** Sep.2017 - Jan.2018
 - Instructor: Prof. Ming-Te Chi
 - **2D Action-adventure Game:** Created a 2D game by Unity and demoed to the class
 - **3D First Personal Shooting Game:** Designed a 3D shooting game using Unity, where players can shoot zombies and protect the base

TECHNICAL SKILLS AND STRENGTHS

- **Programming Languages:** Python, Javascript, Java, C#, C/C++, SQL
- **Software & Tools:** Amazon Web Services, Google Cloud Platform, Heroku, Git, Tensorflow
- **Language:** Chinese (Mandarin), English
- **Test scores:** TOEFL iBT: 104 (R:29, L:27, S:22, W:26), GRE: 322 (Q:169, V:153, AW:3.5)

LEADERSHIP AND ACTIVITIES

- **Computer Science Student Association, NCCU** Sep.2016 - Jun.2017
 - **Equipment Officer:** Managed the property of computer science student association
 - Held a Christmas party for all students in the department of computer science
 - Assisted in organizing a summer camp for high school students to learn programming
- **Cook Club, NCCU** Sep.2016 - Jan.2017
 - Made cakes and desserts and shared with club members once a week
- **Save the Childhood Movement, Waker Foundation** Aug.2014 - Sep.2014
 - **International Volunteer:** Taught English for children in rural areas in Thailand