Zi-Chao Lin

+886-930018099 | zclin.admission@gmail.com | New Taipei City, Taiwan | linzichao.github.io

Research Interests

- **Ubiquitious Computing and Artificial Intelligence**

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**: 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 validated enhanced accuracy and geo-relevance in Bing Maps answers
- **National Chengchi University** — Taipei, Taiwan
  Undergraduate Research Assistant and Teaching Assistant

- **Undergraduate Research Assistant, NCCU Blockchain Group**
  Advisor: Prof. Kung Chen — Jan.2019 - Sep.2019
  - 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**
  Advisor: Prof. Chun-Feng Liao — Jan.2018 - Jan.2019
  - 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**
  Instructor: Prof. Tsai-Yen Li — Sep.2018 - Jan.2019
  - 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**
  Instructor: Prof. Jhe-Wei Lin — Feb.2018 - Jun.2018
  - 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)

Leadership And Activities

- **Students' Information Technology Conference, Academia Sinica** — Mar.2018
  - **Participant**
- **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
- **Volleyball Team of Department of Computer Science, NCCU** — Feb.2016 - Jan.2017
  - Participated in interdepartmental competitions and practiced routinely
- **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

Course Projects

- **Data Science**
  Instructor: Prof. Jia-Ming Chang Feb.2019 - Jun.2019
  - **Interactive web service of PCA analysis**: Built a Shiny application to visualize Anderson's Iris dataset by R
  - Designed intuitive and efficient user interface and deployed to shinyapps.io
- **Introduction to Software Engineering**
  Instructor: Prof. Chun-Feng Liao Feb.2018 - Jun.2018
  - **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 progamming**
  Instructor: Prof. Ming-Te Chi Sep.2017 - Jan.2018
  - **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)