Yen-Shi Wang

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Education

National Taiwan University *Taipei, Taiwan*

B.S. in Electrical Engineering *Sep. 2014 - Jan. 2019*

Double major in Computer Science and Information Engineering (CSIE) *Sep. 2017 - Jan. 2019*

- Overall GPA 4.02 / 4.30, CSIE GPA 4.20 / 4.30 (calculated by 41 credits)
- Related courses: *Operating Systems*, *Algorithm Design and Analysis*, *Data Structure*, *Applied Deep Learning*, *Computer Gaming Theory*, *Multimedia Analysis and Indexing*, *Digital Speech Processing*

Work Experience

BravoAI Co., Ltd. *Taipei, Taiwan*

Software Engineer *Mar. 2018 - Sep. 2018*

- Developed a system that converts fields on certificate of diagnoses from paper into electronic forms.
- Integrated text detection, optical character recognition, and multi-label classification methods.
- Achieved an overall precision of over 90% and used by the biggest insurance companies in Taiwan.
- Sped up the process of health insurance by 10 times.

WorldQuant, LLC *Taipei, Taiwan*

Quantitative Research Intern & Consultant *Jul. 2017 - Jan. 2019*

- Created quantitative models from financial data, which predict the movement of worldwide financial markets.
- Achieved highest Websim score (it is an evaluation of our models) among six interns at the end of the internship.
- Earned the GOLD certificate on Websim and continued to work as a consultant.

Honors & Awards

International

2018 **Rank 116**, Google Code Jam 2018, Round 1C

2017 **12th place**, ACM-ICPC Asia Nakhon Pathom Regional Contest *Nakhon Pathom, Thailand*

2013 **Silver Medal**, 54th International Mathematical Olympiad (IMO) *Santa Marta, Colombia*

Domestic

2018 **Honorable Mention**, Computer Aided Design Contest at ICCAD *Taiwan*

2017 **Silver Medal**, ACM-ICPC Asia Hua-Lien Regional Contest *Hua-Lien, Taiwan*

2017 **Third Prize**, National Collegiate Programming Contest 2017 *Taipei, Taiwan*

2017 **College Student Research Scholarship**, National Science Council *Taiwan*

2016 **Academic Excellence Award (top 5%)**, Dept. Electrical Engineering *Taipei, Taiwan*

2013 **Third Prize**, National High School Mathematics Competition *Changhua, Taiwan*

2013 **Second Prize**, Taipei High School Mathematics Competition *Taipei, Taiwan*

Skills

Programming Languages Expert in C/C++ and Python; Competent in Bash, Verilog, JAVA and Javascript

Tools and Others Linux/UNIX, Docker, Pytorch, MongoDB, ThreeJS, WebGL, CSS, Git

Publications

1. N.-Z. Lee*, **Y.-S. Wang***, and J.-H. R. Jiang. Solving Exist-Random Quantified Stochastic Boolean Satisfiability via Clause Selection. In *Proc. International Joint Conference on Artificial Intelligence (**IJCAI-18**)*, 2018. * Equal contribution

2. N.-Z. Lee, **Y.-S. Wang**, and J.-H. R. Jiang. Solving Stochastic Boolean Satisfiability under Random-Exist Quantification. In *Proc. International Joint Conference on Artificial Intelligence (**IJCAI-17**)*, 2017.

Academic Experience

Undergraduate Research, ALCom Lab (PI: Jie-Hong Roland Jiang) *Taipei, Taiwan*

Researcher for Stochastic Boolean Satisfiability (SSAT) *Sep. 2015 - Aug. 2017*

- Proposed a new algorithm combining clause selection technique and model counting to solve SSAT problem.
- Conducted a survey about previous works, and performed an completed analysis.
- Achieved best average performance on the datasets collected from three related researches.

Teaching Assistant, Signals and Systems *Feb. 2017 - Jun. 2017*

- Taught MATLAB, graded assignments and exams of 200 students, and answered their questions on a weekly basis.

Experimental Assistant, Switching Circuit and Logic Design *Sep. 2016 - Jan. 2017*

- Assisted students to run Verilog programs on FPGA. Given advice on writing modularized and robust code.

Selected Projects

Sokoban solver (assignment in Theory of Computer Games) *Oct. 2018*

- Used tools such as GProf, GDB and Git during the development of programs.
- Combined bi-directional breadth-first search with rules to prune the search space.
- Analyzed the number of visited states with different algorithms (Ex. BFS, DFS, A Star, and DFID).
- Became one of the top 10 solvers in the class.

Round-Robin Scheduling (assignment in Operating Systems) *May. 2018*

- Learned deadlock, race condition, and scheduling methods in operating systems.
- Modified Round-Robin scheduling algorithm in Ubuntu 32-bit kernel.

TCP Go-Back-N and Congestion Control (assignment in Computer Network) *Dec. 2017*

- Learned various protocols in different layers of network (Ex. UDP, TCP, IP and HTTP).
- Simulated TCP Go-Back-N and congestion control protocols by UDP connection.

Mail Service (final project in Network Administration and System Administration) *Jun. 2017*

- Learned basic knowledge of DNS, routers, Linux account management, LVM and firewall.
- Used Wireshark to detect packages and set up firewall in the assignments.
- Built a mail service with LDAP (account database), Postfix (mail server) and Dovecot (storage server).
- Used Ansible to deploy the entire service by one click.