

Haifeng Shi

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🌐 AndrewShf

Education

- Sep 2016 **Southwest Jiaotong University**, Chengdu, China.
– Jul 2020 B.Eng. (Expected) in Computer Science and Technology
GPA: 86.7/100 (Major GPA: 87.5), **Latest Rank:** 10/140
Course Highlights: Data Structure Experiment (97), The Principle of Microcomputer (94), Computer Graphics (93), Physics-II (91), Discrete Math (89), Higher Mathematics-II (89)

English Proficiency

TOEFL: 105 (reading: 29, listening: 29, speaking: 23, writing: 24)
GRE: 323 (verbal: 156, quantitative: 167, analytical writing: 3.5)

Project Experience

- Jan 2020 **Multi-objective Community Detection**, Graduation Design
– Present Advisor: Professor [Hongmei Chen](#).
 - Implemented algorithm MDBBO; used union-find set to enhance the decoding performance; reduced the time complexity of SimAtt(one objective function)
 - Modified algorithm MANIA; added non-dominated sorting to PESA-II framework; designed grid-overflow mechanism; replaced original genetic operations with harmony search
 - Utilized Flask and jQuery to build a web application that supports visualization of detection result
- Oct 2019 **Data analysis based on AIS data**, Internship at NUS
– Dec 2019 Instructor: Mr. [Xiaoyang Wei](#).
 - Used binary-search and Pandas to preprocess the spatio-temporal data (50 million records)
 - Supplemented the missing data by search engine scraping (at normal speed). Ship information coverage increases from 60% to 96%
 - Applied weighted least square method and box-cox algorithm for better fitting the data
- Mar 2019 **Tunnel Monitoring System**, Course Project
– May 2019 Instructor: Mr. Zongling Wu.
 - Designed the circuit diagram by using Proteus, containing 4 identical modules with 7 different sensors and a slave computer
 - Utilized RS-485 standard for data transmission. Data is then encrypted and stored in database
 - Developed an interface by using c# libraries, allowing administrators to check security statuses in 4 tunnels by observing the dashboards and graphs
- Jan 2019 **Products Classification by name**, Contest supported by Inspur Inc
– May 2019 Advisor: Professor [Hongcai Tao](#).
 - Used TensorFlow to accomplish the classification of 4.5 million goods. Suffered from the poor quality of the training set, it still reached an accuracy of 85% on validation set.
 - Partnered with teammates, and tried models like GRU, LSTM, Text-CNN. Optimized the embedding layer with Word2Vec to reach the accuracy of 85%

Selected Honors and Awards

- September 2019 **Second-Class Scholarship**, Southwest Jiaotong University (SWJTU)
ranking: 10/140.

September 2018	Third-Class Scholarship, ranking: 21/140.	SWJTU
September 2017	Second-Class Scholarship, ranking: 13/120.	SWJTU
May 2019	National Third Prize of SSOI Competition, Our topic was an NLP problem given by Inspur Inc.	Ministry of Education
April 2019	Second-Prize, ACM Competition of SWJTU, ranking: 7/90. 2 lines of code away from top 3.	SWJTU
April 2019	Provincial Second-Prize of Program Design, ranking: 29/250.	"LanQiao" Cup
April 2018	Second-Prize, ACM Invitational Competition of SWJTU, ranking: 15/130. A world final team and several gold medal teams were invited.	SWJTU
December 2017	Mini Marathon held in Southwest Jiaotong University, ranking: 12/500.	SWJTU

Extracurricular Activities

- Mar 2018 **Student Lecturer & Online Course,** Academic Development Center.
- Jun 2018 I was one of the leaders and planners of this activity. We organized top students from Information Science department to prepare online courses; we encouraged them to share unique insights, course notes, self-learning experiences with others.
- Sep 2016 **Freshman Soccer Cup,** Information Science Department Soccer Team.
- Dec 2016 I was the captain and played the right back in the freshman soccer cup. We stopped at quarterfinals.

Skills

Programming Languages: Python, C/C++, Java, jQuery, Bash, Verilog, ASM, MySQL

Tools and Frameworks: Vim, CLion, TensorFlow, Flask, SpringBoot, Echarts, OpenGL