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Jiatong LI

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Education

Anhui Province, China — **University of Science and Technology of China (USTC)** — **Sep. 2018 – Present**

Bachelor of Data Science

▷ GPA: 3.88/4.3 (90.5/100) Ranking: 5/29
- CS Courses: Data Structures (93/100) / Foundations of Algorithms (88/100) / Operating System (90/100)
- DS Courses: Introduction to Data Science (99/100)/ Introduction to Machine Learning(91/100)
- Math Courses: Probability and Statistics (99/100) / Algebraic Structure (94/100) / Function of Complex Variable (95/100) / Linear Algebra (88/100) / Operation Research (94/100)

▷ TOEFL: 101/120
- R: 30 L: 25 S: 24 W: 22

Research Experiences

▷ **Hierachical Cognitive Diagnosis Model in Intelligent Education Systems** **Dec. 2020 – Present**
Advisor: Qi Liu, Professor, School of Data Science, USTC
- Designed a novel hierachical cognitive diagnosis (HierNCD) model based on knowledge graph used in cognitive diagnosis task
- Built a hierachical neural network based on HierNCD model using PyTorch to predict student performance on answering questions and output students' cognitive diagnosis result
- Currently working on optimizing the HierNCD model and preparing a paper for EDM 2021

▷ **Mathmatical Model for Simulating Pressure Fluctuation in Fuel Pipe** **Sep. 2019 – Oct. 2019**
- Built up ordinary differential equations (ODE) to show mathmatical relationship among pressure, fuel injection rate and one-way valve open period of a given fuel pipe
- Implemented a pressure simulator based on the equations and pipe attributes to show pressure fluctuation
- Developed numerical optimization programs for solving the differential equations numerically and controlling the one-way valve open period to minimize pressure fluctuation
- The optimization result won **national first prize in the Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM) (Top %1)**

▷ **RISC-V CPU Simulator based on Java** **Dec. 2019 – Jan. 2020**
Advisor: Hong An, Professor, School of Computer Science and Technology, USTC
- Designed a RISC-V CPU simulator which was based on finite machine and enabled more than 15 instructions to be executed in the Java virtual machine
- Implemented a GUI using JavaFX for users to interact with the simulator, including loading memory data, changing register data and setting breakpoints.

Additional Experience and Awards

▷ Outstanding Student Scholarship Silver Award Sep. 2019
▷ Outstanding Student Scholarship Silver Award Sep. 2020

Languages and Technologies

▷ Tensorflow; PyTorch
▷ C; C++; Python; Java;
▷ Mathematica; Matlab; Origin; LaTeX