

LISI WANG

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EDUCATION

Clemson University

Master of Computer Science (*GPA: 3.85/4*)

Ph.D in Computational Chemistry

Clemson, SC

May 2019

Expected Aug 2020

Central South University

Master of Material Science and Engineering (*GPA: 3.7/4*)

Bachelor of Material Science and Engineering (*GPA: 88.01/100*)

Hunan, China

June 2015

June 2012

SKILLS

Languages: C++(Proficient), C(Proficient), Java(Proficient), Python(Basic), R(Basic), SQL(Basic)

Libraries: TensorFlow, PyTorch, Keras, Numpy, Pandas, Spark, Jupyter, CUDA

RELEVANT COURSEWORK

Introduction of Artificial Intelligence, Machine Learning, Advanced Operating Systems, Design & Anlys of Algorithms, O O Software Design, Parallel Architechture, Network Science, Statistical Methods I

PROJECTS

Library Management System

- Created a library management system with user *account management interface*, *data management functions* and *database administration* by using PHP and HTML
- Designed and developed a web service supporting *query rewriting*, *quick search*, *book reservation*, *book ranking*, *book filtering*, and *book rendering* by using MySQL

Amazon Product Recommendation System

- Built recommendation system by computing similarities between customers and products with pseudoinverse of the Laplacian matrix($L+$), matrix-forest-based algorithm (*MFA*) and knearest neighbors (*kNN*)
- $L+$ scoring function with product-based prediction method exhibit the best performance and achieved the degree of agreement **0.99**

Protein Protein Interaction Interface Prediction

- Predicted protein protein interaction interface pairs by Recurrent Neural Network(*RNN*) and Long Short Term Memory model(*LSTM*) with highest accuracy order 59%
- Increased accuracy order of LSTM architecture by **10** times higher by using *RMSprop gradient descent* optimization and *under-sampling* method

Optimization of XV6 Operating System

- Added *shared memory pages* function into XV6 system to allow processes to communicate with each other
- Modified XV6 with a *file system consistency checker* by using 1-byte checksum and 3-byte pointer
- Implemented *kernel thread* functions to create new kernel thread
- Added a new *priority-based scheduler* with round-robin algorithm

Molecule View GUI

- Built a GUI for molecule view system by Python and Tkinter with **MVC** framework
- Implemented basic *Visual Molecular Dynamic Simulation* with Lennard-Jones potential and basic simulation analysis interface

EXPERIENCE

Teaching Assistant

August 2015 - Present

- Selected for key role in general chemistry lab and physical chemistry lab
- Oversee/coach students and evaluate experiment results

PUBLICATION

- Lisi Wang, Jun Li, Dandan Wang, Danyang Wang, and Hengfeng Li. Preparation and properties of core-shell silver/polyimide nanocomposites. *Polymer bulletin*, 71(10):2661–2670, 2014
- Lisi Wang, Xiaoyu Piao, Heng Zou, Ya Wang, and Hengfeng Li. High dielectric, dynamic mechanical and thermal properties of polyimide composite film filled with carbon-coated silver nanowires. *Applied Physics A*, 118(1):243–248, 2015