

# CHONG MENG

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## EDUCATION

### CLEMSON UNIVERSITY

*Master of Science in* COMPUTER SCIENCE

Course: Computer Graphics, Algorithms, Operation System, Data Structure, Data Mining, Deep Learning, Parallel Architecture, Data Visualization, Computer Organization, Network Science.

Aug. 2017 – May 2020 (expected)

Major GPA:3.82

### BEIJING UNIVERSITY OF POSTS AND TELECOMMUNICATIONS

*Master of Science in* ELECTRICAL ENGINEERING

Course: Advanced Matrix Theory, Communication Theory, Information Theory, Probability Theory and Random Process.

Aug. 2014 – May 2017

Major GPA:3.80

### OCEAN UNIVERSITY OF CHINA

*Bachelor of Science in* PHYSICS

Course: Computer Security, Network management, Interface Technology, Network Technique, Advanced Mathematics.

Aug. 2010 – May 2014

Major GPA:3.61

## SKILLS

<b>Language</b>	C++, C, Java, C#, Python, Javascript, MakeFile, Linux Shell Script, Latex, Markdown
<b>Tool</b>	Visual Studio, Eclipse, Tableau, Jupyter Notebook, Git, OpenGL, Pytorch, TensorFlow
<b>Knowledge</b>	OOP, Multi-threads, Computer Vision, Network security, Data Mining and Visualization, Deep Learning.

## EXPERIENCE

### Ittron Inc. USA

*Develop test-automation application on .NET platform*

Jul. 2019 - Aug. 2019

- Design the layout of user interface via **XAML** under **WPF** framework, added customized **Control** by Windows **.dll**.
- Implemented the functional part of application using multi-threading by **c# task**, supporting dynamic task.
- Improved the code to be easily extended. Application is tested by engineers and improved according to feedback.

### Beijing University of Posts and Telecommunications China

*Develop high performance parallel computing software for electromagnetics simulation at the IPOC Lab*

Jul. 2014 - May. 2017

- Based on the survey papers, I implemented numerical algorithms for electromagnetics simulation, including the **The finite-difference frequency-domain (FDFD) method**, **The biconjugate gradient method (BiCG) method**.
- Implemented the parallel algorithm by **CUDA and MPI**, utilize the high computing ability of multi-GPUs.
- Combined the parallel simulation solver with **Convex Optimization**. Design new devices for optical communication system. Published two conference papers based on this project.

## SELECTED PROJECTS

### Data Mining

*Data Mining Project*

Jan. 2019–May. 2019

- Implemented python script to preprocessing data with Pandas and Numpy, and visualized features by snsplot.
- Search relevant information online and use Pandas and other modules to map it to dataset, remove outliers.
- From sklearn, using regression model random forest, xgboost and SVM to fit the dataset to a prediction model
- Build a web page to interactively visualize the results using JS library D3 and D3plus.

### Library Management System

*Web Development*

Aug. 2018–Dec. 2018

[GitHub](#)

- Implemented the project under the MAMP PRO and using the phpMyAdmin to develop the database
- Designed the database management system which satisfies the Boyce-Codd normal form
- Utilized the TP frame to develop the server and implemented the database recovery using the backup
- Implemented user authentication with FireBase to support 3rd party (fb, tw) users

### Operating System Tools

*User-level Operating System Tools*

Jan. 2019–May. 2019

[GitHub](#)

- Developed a memory leak detector using a shim library and system call tracer using ptrace for user applications
- Developed a user mode thread library provides APIs for thread management and thread synchronization function.
- Developed a memory allocator provides functions as standard C allocation API using mmap and segregated list