

# Yuquan Shan

## *Curriculum vitae*

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### EDUCATION

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2014 – 2018 **Pennsylvania State University**  
PH.D., COMPUTER SCIENCE  
University Park, PA  
GPA: 3.97/4.00

2009 – 2013 **Jinan University**  
B.ENG., ELECTRICAL ENG.  
Guangzhou, China  
GPA: 86.6/100

### EXPERIENCE

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DEC 2018 – Now  
Facebook, Menlo Park, CA  
**Research Scientist**  
Developing and maintaining the audience-based search services for Facebook Ads.

JUN 2014 – DEC 2018  
Penn State University, University Park, PA  
**Research Assistant**

Studied the scheduling algorithm of Mesos and compared it with other algorithms in terms of performance and fairness; added a new allocator in Mesos implementing our proposed algorithm. Studied the scheduling mechanism of Spark. Investigated the effect of the uneven workload assignment to workers with different qualities in the cluster. Worked on shuffle-and-quarantine strategy to handle the DDoS attack in the cloud.

SEP 2017 – DEC 2017  
Facebook, Menlo Park, CA  
**Software Engineer Intern**

Worked on Spark shuffle I/O optimization. Added new features on Spark mapper, reducer and external shuffle service which can significantly reduce read/write traffic and task durations. Created a stress test suite that has been integrated in FB Spark's nightly build.

MAY 2017 – AUG 2017  
IBM Research, San Jose, CA  
**Research Intern**

Bounded point-in-time recovery in NoSQL database:  
Developed APIs for point-in-time recovery in RocksDB;

derived and trained a model which can accurately predict the database recovery time; built a database system module which achieves persistency using both database backup and write-ahead-log, and dynamically takes back-up in order to fulfill the bound of recovery time.

JAN 2016 – MAY 2016  
Penn State University, University Park, PA  
**Teaching Assistant**

Worked as a teaching assistant for the course *Operating Systems Design & Construction*. Wrote and modified C codes for course projects. Wrote the script codes for automatic grading. Held office hours to provide help for homeworks, projects and other problems.

### SELECTED COURSEWORK

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PSU.CSE 565 Algorithm Analysis  
PSU.CSE 511 Operating Systems Design  
PSU.CSE 584 Machine Learning  
PSU.CSE 514 Computer Networks  
PSU.CSE 517 Performance Analysis  
PSU.CSE 555 Numerical Optimization

### PUBLICATIONS

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Please check out my dblp profile.

### AWARDS

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2013 Excellent Undergraduate Graduation Thesis  
2013 1st Class Excellent Senior Student Scholarship  
2010 2nd Class Excellent Student Scholarship

### COMMUNICATION SKILLS

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ENGLISH Fluent  
CHINESE Mother tongue

### SOFTWARE SKILLS

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LANGUAGES Java, Python, Scala, C/C++,  
MATLAB,  $\LaTeX$ , HTML, Go  
OS Windows, Linux, Mac OS