

# YUE GONG

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## EDUCATION

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**Southern University of Science and Technology**, Shenzhen, China Sep.2016 - Present  
*Bachelor* in Computer Science and Engineering (CSE), expected June 2020  
**GPA: 3.88/4.00 (2/145)**

**The University of California, Irvine**, Irvine, USA July.2019. - Sep.2019  
*Visiting Student* in Information and Computer Sciences (ICS)  
**GPA: 4.00/4.00**

## EXPERIENCE

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**University of California, Irvine**, Irvine, America July.2019 - Sep.2019  
*Research Internship* in Information and Computer Science Department (ICS)

**Southern University of Science and Technology**, Shenzhen, China Sep.2018 - Jan.2018  
*Teaching Assistant* in C and C++ Programming

## RESEARCH PROJECT

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**Speed Up Query Execution by Pushdown In AsterixDB** July.2019 - Sep.2019  
*Individual Research Project* Supervisor: Prof.Michael Carey

AsterixDB is a Big Data Management System. To avoid the expensive memory copy cost between operators (e.g. project, select, assign), we push execution logic down to the data-scan stage as much as possible for three patterns of queries.

- Explore three patterns of query on which pushdown can have a performance impact
- Integrate new rewriting rules into a large code-base and achieve at most 34.6% speed-up
- Design comprehensive benchmarks to test the performance

**Efficient Cache Management for Replicated Web Search Engine** Sep.2018 - Present  
*Individual Research Project* Supervisor: Prof.Bo Tang

Uniform caching scheme in most search engines simply caches the same content on all the servers which does not exploit the variations among queries. To tackle this limitation, we want to develop a new caching scheme which diversifies the cache contents in different servers by training past query log.

- Provide the theoretical inapproximability proof of diversified caching problem
- Implement a framework with a suite of techniques and heuristics for diversified caching
- Enhancing the cache admission process with semantic information of words.[in progress]

## STANDARD TESTS

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TOFEL Test: 109 (30R, 28L, 24S, 27W) Feb.2019  
GRE General Test: 321 (153V, 168Q) May.2018

## HONORS AND AWARDS

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*1<sup>st</sup> Prize*, Scholarship for Outstanding Student (5%) Sep. 2017  
*2<sup>nd</sup> Prize*, Scholarship for Outstanding Student Sep. 2018  
Scholarship for Outstanding Fresher Sep. 2016  
National Chemical Olympiad (National Second Prize) Oct. 2015  
National Mathematical Olympiad (National Third Prize) Oct. 2015