

# ZENG, YUKUN

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1600 Southwest Pkwy APT 1301 ✧ College Station, TX 77840, U.S.

## OBJECTIVE

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Seeking a software engineer intership for 2017 summer

## EDUCATION

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**Texas A&M University**  
Master of Science in Computer Science  
GPA: 3.67/4.00

**College Station, TX**  
*Expected Graduation: May, 2018*

**Harbin Institute of Technology**  
Bachelor of Engineering in Software Engineering  
GPA: Overall 3.45/4.00, Major 3.70/4.00

**Weihai, China**  
*Sep. 2012–July 2016*

## EXPERIENCE

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**Graduate Researcher**  
*Parasol Lab, supervised by Prof. Nancy M. Amato*

**College Station, TX**  
*Sep. 2016 - Present*

- Designed and implemented several Robot Motion Planner with Midpoint Guided Sampling
- Experiences in working with robotic fundamentals, like VIZMO++ (robot motion planning visualization), PMPL(Parasol Motion Planning Library)
- Researching on simulating robot group behavior, e.g., Multi Robot Persistent Coverage Problem simulation

**Software Engineer Intern**  
*ARRIS Group*

**Shenzhen, China**  
*Jan. - May 2016*

- Automated signal-free wireless testing environment setup and modem performance benchmarking
- Modem routing architecture modification for security reinforcement

**Co-Chair**  
*HIT Robot Innovation Workshop*

**Weihai, China**  
*May 2015 - Jan. 2016*

- Led the development of two competition projects in National Robot Championship
- Used RoboBasic to develop a matrix approach of stable robot gait planning for RoboNova series robots

## SELECTED PROJECTS

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**Mobile Storm: Distributed real-time stream processing for mobile cloud** Research Assistant

- Proposed greedy and genetic algorithms for job topology allocation on multi workers with varying executors (NP-Hard), generally yields results within 30% gap comparing to near-optimal solution (CPLEX) but runs 100x faster
- Developed a Neural-like topology generator for job submission simulation to test our allocation algorithm
- Working on distributed streaming face recognition applications for real-world application experiments, which involves socket communication, multi-threading, stream processing, etc.

**High-responsive scheduling for heterogeneous Hadoop YARN cluster** Research Assistant

- Experiences in Hadoop YARN basics like cluster setup and maintenance, Hadoop APIs (including RESTful APIs)
- Developed a cloud computing benchmark suite to test performance of heterogeneous Hadoop YARN cluster running multi frameworks like MapReduce, Spark, etc
- Proposed a novel job size prediction approach based on Machine Learning techniques and designed a size-based scheduling framework, which substantially improved the responsiveness of Hadoop cluster

**Flash Vocabulary - Lightweight website for boosting vocabulary online** Leader

- Devised a novel MVC-derived pattern that best fits the interaction mode of our website
- Developed a comprehensive front-end framework to simplify front-end codes and create a universal UI
- Adopted AJAX and HTML5 Local Storage to avoid unnecessary reloading and enhance user experience

**Jizhi Tutor Service - Online edu platform on Cloud** Co-Leader

- Applied HTML, CSS, Javascript (jQuery) to the front-end dev, used complex SQL Server database (with triggers, view, stored procedure, etc) and .NET platform for data storage and business logic

- Lead the entire platform dev from designing, implementation to Cloud deployment and maintenance

#### **General Coding - An APP to improve programmers' productivity**

Key Developer

- Developed the APP which highlights on improving user experience by optimizing data structure and algorithms, extensible to multi programming language API integration
- Implemented an objective linked-list and fuzzy query algorithm (Levenshtein Distance) in our Full-Text Inter-PL (Programming Language) API search engine

### **PUBLICATIONS**

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[1]Liu, Yang, **Yukun Zeng** and Xuefeng Piao. "High-Responsive Scheduling with MapReduce Performance Prediction on Hadoop YARN." Embedded and Real-Time Computing Systems and Applications (RTCSA), 2016 IEEE 22nd International Conference on. IEEE, 2016.

[2]Gaoyang Li, Guangri Quan, **Yukun Zeng**, "MASS: A short reads alignment tool oriented to massivedata," The Workshop on Algorithms in Bioinformatics 2016, submitted.

### **HONORS&AWARDS**

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<b>Best Paper Award</b> for Outstanding Bachelor Dissertation	July 2015
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<b>Meritorious Winner(1st Prize)</b> in National Robot Championship	July 2015
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<b>Honorable Mention</b> in Mathematical Contest in Modeling (MCM)	Apr. 2015
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<b>2nd Place</b> in HIT Software Design Competition	Mar. 2014
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<b>People's Scholarship</b> 5 times	Oct. 2013, Oct. 2014, May 2015, Oct. 2015, Apr. 2016
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