

# FENGYU DENG

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## EDUCATION

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**Shanghai Jiao Tong University**

*September 2014 - June 2018(expected)*

Major: Electronic Engineering

Major GPA: 89.83/100 Overall GPA: 87.46/100 Rank: 18/169

Interest: Data Science, Natural Language Processing, Machine Learning

## RESEARCH INTERN

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**University of California, Santa Barbara**

*April 2017 - September 2017*

Natural Language Processing lab, Computer Science Department

Advisor: Prof. William Wang

Project: Reinforcement Learning framework for temporal QA reasoning

## PUBLICATIONS

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[1] **F. Deng**, WY. Wang, “**Reinforcement Learning framework for temporal QA reasoning**”, prepare to submit to *Proc. of ACL* 2018.

[2] **F. Deng**, L. Kong, J. Liu, J. Zhao, J. Wang, L. Fu, Xinbing Wang, “**Evolving Scholarly Networks: Experiments, Modeling and Analysis**”, submitted to *ACM KDD* 2017. (Average quality score : 3.75/5)

[3] Z. Song, L. Wang, S. Li, **F. Deng**, Z. Wu, L. Fu, Xinbing Wang, “**ZeroRank: Ranking Current Year Scientific Literatures with No Citation**”, submitted to *ACM CIKM* 2016.

## PROJECTS

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Research in **Natural Language Processing** (Supervisor: **Prof. William Wang**)

**Reinforcement Learning framework for temporal Question-Answer reasoning** *April 2017 - present*

*Project leader*

- Invented a new way to solve temporal reasoning problems by combining Reading Comprehension.
- Built a novel temporal dataset which contains about 300 thousand document-question-answer pairs for large-scale deep learning training.
- Designed a DQN-based Deep Reinforcement Learning model for temporal QA problems.

Research in **Data Mining & Networks** (Supervisor: **Prof. Xinbing Wang**)

**Evolving Scholarly Networks based on big data**

*June 2016 - February 2017*

*Project leader*

- Originally explored comprehensive properties in scholarly networks by experiments on real-world datasets about 120 million publications in 19 domains.
- Proposed a comprehensive evolving model of scholarly networks which focuses mainly on papers, authors and topics of publications.
- Offered detailed mathematical proof to consolidate the reasonability of our model such as the power-law distribution and densification.
- Simulated the whole evolving process of scholarly networks to prove that our model can well capture the real networks' properties.

## Novel Academic Information System Design

Mar 2016 - Present

Project member

- Classified papers by their field concerned in hierarchy based on Microsoft Academic Graph.
- Used Force-Directed Algorithms to find the appropriate position of each paper and output svg files.
- Converted svg files to png files and snip them into tiles for showing in the website.

## Acenap: Academic Network Analytic Platform

February 2017 - Present

Project member

- Generating models that are commonly used in social network analysis.
- Displaying algorithms that are proposed by our own research group or adopted from the existing state-of-the-art work in social-related areas.
- Collecting datasets from different social networks and academic networks.

## Zero Citation Ranking for Scientific Literature

October 2015 - Mar 2016

Project member

- Proposed a new problem – ranking no citation papers that are recently published.
- Designed an novel algorithm combining both random walk in heterogeneous network and learning-to-rank method to rank publications.
- Conducted experiments to show our method outperformed previous methods in different metrics such as NDCG and MAP.

## PATENTS

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[1] Z. Wu, **F. Deng**, Z. Song, L. Wang, S. Li, H. Wu, Y. Yang, Y. Yang, W. He, Y. Liao, Y. Qi, J. Zhao, L. Fu, X. Wang, “**Ranking No Citation Papers Based on Random Walk Model**”, China, Invention Patent.

## HONORS & AWARDS

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Kai-Yuan Endeavor scholarship (Awarded to 15 out of 12,000 undergrads at SJTU)	2017
National Endeavor scholarship (Top 5% of undergrads in SJTU)	2017,2016
Scholarship of Academic Excellence of SEIEE (Top 10% in the EE Department)	2017,2016,2015
Second Prize in China Undergraduate Mathematical Contest in Modeling (China)	2016
Second Prize in China Undergraduate Physics Contest(Shanghai)	2015

## EXTRACURRICULAR EXPERIENCE

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### Teaching Assistant, SJTU for EI 901 (Electronics Lab.)

- Taught project design on multimeter.

### Member in Student Leadership Camp

- Responsible for holding plentiful activities to develop leadership.

## TECHNICAL STRENGTHS

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<b>Computer Languages</b>	Proficient in Python, C/C++; Familiar with Java, Verilog, SQL
<b>Web Design</b>	HTML/JS/CSS, Bootstrap
<b>Other Tools</b>	L <sup>A</sup> T <sub>E</sub> X, Git, Pytorch, TensorFlow, MATLAB