

FEI XIA

2# Zijing Student Apartment ◇ Tsinghua University ◇ Beijing 100084, P.R. China
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EDUCATION

Tsinghua University, Beijing, China *2012 - 2016(Expected)*
B.E.(*Expected*) Department of Automation
GPA: 94.1/100
Ranking 1st/144 in Dept. of Automation

Georgia Institute of Technology, Atlanta, GA, USA *2014.8 - 2014.12*
Exchange student in School of Electrical and Computer Engineering
GPA: 4.0/4.0

RESEARCH EXPERIENCES

Stanford University, Stanford, CA, USA *2015.7 - Present*
Information Systems Laboratory, Department of Electrical Engineering
Research Assistant

- ***De novo* DNA Sequence Assembly from Barcoded Reads**
- Supervisor: **Prof. David Tse**
- Established information theoretic bounds for a third generation sequence technology, 10X.
- Designed algorithms to take advantage of barcoded linked reads to generate better assembly than state of the art.
- Experimented on Human Chromosome 21, and boosted N50 of state-of-the-art assembler by 30%.
- **Ongoing project: A *de novo* Sequence Assembler for PacBio Reads Based on Sparse String Graph**
- Able to generate **finished** assembly for E.Coli based on sparse string graph methods.

Georgia Institute of Technology, Atlanta, GA, USA *2014.8 - 2014.12*
Sun Lab, School of Computational Science & Engineering, College of Computing
Research Assistant

- **Epilepsy Seizure Prediction Based on EEG Data**
- Supervisor: **Prof. Jimeng Sun**
- Generally applied machine learning and data mining techniques to solve healthcare problems
- Built an analytic model for epilepsy seizure prediction based on EEG data
- Participated in Kaggle Competition, and ranked top 10% (out of 504 teams)
- **Ongoing project: Cost Estimation for Cloud-Based Analytic Machine Learning Pipeline**

Tsinghua University, Beijing, China *2014.2 - Present*
Knowledge Engineering Group, Department of Computer Science and Technology
Research Assistant

- **Continuous Time Information Network Mining for Diffusion Cascades**
- Supervisor: **Prof. Jie Tang**
- Designed various models for continuous-time information diffusion in networks
- Proposed methods for learning models and making inferences

Tsinghua University, Beijing, China
Center for Synthetic and System Biology
MOE Key Laboratory of Bioinformatics and Bioinformatics Division
Research Program Member

2013.7 - 2014.7

- **Marvelous TALE — Towards Better DNA Editing Tools**
- Supervisor: **Prof. Xiaowo Wang, Prof. Zhen Xie**
- Developed a DNA optimizing algorithm based on genetic algorithm and sequence alignment for reducing homologous recombination probability of TALE expression in E.Coli
- Implemented the algorithm, conducted experiments and provided data for wet-lab synthesis
- Participated in International Genetically Engineered Machine Competition 2014 and won Bronze Prize

Tsinghua University, Beijing, China
Tinker@Home Group, Texas Instruments-Tsinghua Future Robots Club
Team Leader

2013.1 - 2014.7

- Worked on developing a robust face detecting and recognizing system for robots.
- Developed a package for face detection, alignment, archive building, and recognition.
- Participated in RoboCup 2014 in João Pessoa, Brazil, won 10th place in @Home League.

PUBLICATIONS AND MANUSCRIPTS

Conference Publications

- [1] **Fei Xia**, *et al.* Human-aware mobile robot exploration and motion planner. *Proceeding of South-eastCon 2015*.

Manuscripts

- [1] Hang Su, **Fei Xia**, Jimeng Sun, *et al.* Tell Me the Price First: Cost Estimation for Cloud-Based Healthcare Predictive Modeling. *to be submitted to Journal of Medical Internet Research*
- [2] **Fei Xia**, Yu Xia, Jie Tang. Continuous Time Information Network Mining for Diffusion Cascades.

AWARDS

- 2015** Chang Jiong Scholarship (Highest honor in Dept. of Automation, 1 out of 560)
2014 Chongzhi Fang Scholarship (Highest honor in Dept. of Automation, 1 out of 560)
2014 China Scholarship Council Excellent Undergraduate Fellowship
2014 Tsinghua Sparks Program (Undergraduate High-tech Club) Membership
2013 National Southwest Associateo University Scholarship (1 out of 560)
2012 Tsinghua University Outstanding Freshman Scholarship
2011 Gold Medal of 25th Chinese Chemical Society National Chemistry Contest (Ranking 8th/92k)

TECHNICAL STRENGTHS

Programming Languages	Proficient in C/C++, Python, Matlab, Java
Tools	ROS, vim, git, cmake, gcc, L ^A T _E X
Research	Knowledgeable with state-of-the-art machine learning techniques.

LANGUAGE SKILLS

- English** Excellent listening, speaking, reading and writing abilities
- TOEFL iBT 109/120
 - GRE Verbal 155/170, Quantitive 170/170, Analytical Writing 4.0/6.0