

# HAOCHEN CHEN

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## EDUCATION

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### **Stony Brook University**

August 2014 - May 2019 (Expected)

*Ph.D. in Computer Science*, Advisor: [Prof. Steven Skiena](#)

Research Interests: Data mining and machine learning, particularly representation learning on graphs.

### **Harbin Institute of Technology, China**

September 2012 - June 2014

*M.Eng. in Computer Technology*

### **Harbin Institute of Technology, China**

September 2008 - July 2012

*B.Eng. in Computer Science and Technology*

## WORK EXPERIENCE

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### **Software Engineer Intern, Facebook**

June 2018 - August 2018

#### **Places GeoData Team**

New York City, NY

- Worked on building machine learning models to infer mappings between Facebook places and WiFi names. For example, Starbucks should be associated with WiFi name “Google Starbucks”.
- Built the entire machine learning pipeline from candidates generation and feature computation to an ML model based on GBDT.
- Technologies involved: Python, Hive/Spark

### **Software Engineer Intern, Google**

May 2017 - August 2017

#### **Commonsense Team**

Mountain View, CA

- Worked on improving Hyperpedia scoring model by incorporating word embedding features using a deep neural network. Hyperpedia is a large-scale database of is-a relations between instances and categories (such as “Google - company”).
- Our neural network model achieves an AUC score of 0.774 on human annotated data, while the previous production model based on pattern matching counts gets an AUC of 0.742.
- Technologies involved: C++, Python, Tensorflow

### **Software Engineer Intern, Two Sigma Investments**

May 2016 - August 2016

#### **Modeling Data Engineering Team**

New York City, NY

- Worked on project “Dataset Explorer”, which is a data processing and visualization tool for financial fundamental data like earnings estimates.
- Technologies involved: Scala, Java, Angular.js, Highcharts

### **Software Engineer Intern, Two Sigma Investments**

May 2015 - August 2015

#### **Quantitative Application Engineering Team**

New York City, NY

- Worked on project “SimBot”, which is a platform for running and analyzing batch of simulations.
- Technologies involved: Workflow Engine, Java, Angular.js, Chart.js

### **Technology Researcher Intern, Tencent**

August 2011 - November 2011

#### **Search Platform Department**

Shenzhen, China

- Designed **benchmarks** for memset()/memcpy(), memory, I/O, sort algorithms and TCP/IP, which were used to analyze performance bottleneck of infrastructure.

## PUBLICATIONS

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- **Haochen Chen**, Bryan Perozzi, Rami Al-Rfou and Steven Skiena: *A Tutorial on Network Embeddings*, [arxiv:1808.02590](https://arxiv.org/abs/1808.02590), 2018.
- **Haochen Chen**, Xiaofei Sun, Yingtao Tian, Bryan Perozzi, Muhao Chen and Steven Skiena: *Enhanced Network Embeddings via Exploiting Edge Attributes*, **CIKM**, 2018.
- Yun He, **Haochen Chen**, Ziwei Zhu and James Caverlee: *Pseudo-Implicit Feedback for Alleviating Data Sparsity in Top-K Recommendation*, **ICDM**, 2018.
- Yingtao Tian, **Haochen Chen**, Bryan Perozzi, Muhao Chen, Xiaofei Sun and Steven Skiena: *Social Relation Inference via Label Propagation*, Workshop on Mining and Learning with Graph, **KDD**, 2018.
- **Haochen Chen**, Bryan Perozzi, Yifan Hu and Steven Skiena: *HARP: Hierarchical Representation Learning for Networks*, **AAAI**, 2018.
- Bryan Perozzi, Vivek Kulkarni, **Haochen Chen** and Steven Skiena: *Don't Walk, Skip!: Online Learning of Multi-scale Network Embeddings*, **ASONAM**, 2017.
- **Haochen Chen**, Arvind Ram Anantharam and Steven Skiena: *DeepBrowse: Similarity-Based Browsing Through Large Lists*, **SISAP**, 2017.
- Ting Liu, Xiao Ding, Yiheng Chen, **Haochen Chen**, and Maosheng Guo: *Predicting movie Box-office revenues by exploiting large-scale social media content*, Multimedia Tools and Applications, 2016.

## AWARDS

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5th Place in ACM/ICPC Greater New York Regional Contest	2014
First-Class Special Computer Science Chair Fellowship of Stony Brook University	2014
Honorable Mention in <b>ACM/ICPC World Finals</b>	2010
<b>Gold Medal</b> in ACM/ICPC Asia Regional Contest	2009

## SKILLS

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<b>Programming Languages</b>	C/C++, Python, Java, Shell Scripts, Scala, JavaScript
<b>Tools &amp; Packages</b>	L <sup>A</sup> T <sub>E</sub> X, Jupyter Notebook, Numpy, Tensorflow, Angular.js

## EXTRACURRICULAR ACTIVITIES

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<b>Research Assistant</b> , Data Science Lab, Stony Brook University	2015 Fall - Present
<b>Teaching Assistant</b> for various courses:	
– Analysis of Algorithms, Stony Brook University	2015 Spring
– Foundations of Computer Science, Stony Brook University	2014 Fall
– Advanced C++ Language and Programming, Harbin Institute of Technology	2009 Fall
<b>Co-coach</b> , ACM ICPC Team, Stony Brook University	2016, 2017
<b>Problem Setter</b> for various programming contests:	
– Stony Brook University Local Programming Contest	2016, 2017
– ProgNova Multi-University Programming Contest	2016, 2017
– HIT Local Programming Contest	2011, 2012