Tianyi Chen

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EDUCATION

Graduate School of Arts and Sciences, Boston University **September 2017 - January 2019**
Master Degree in Computer Science GPA: 3.73/4.0
School of Software Engineering, Xi'an Jiaotong University **September 2013 - June 2017**
Bachelor Degree in Software Engineering

EXPERIENCES

Research on Functional Object-Oriented Graph Automation platform, Harvard University **May 2018 - present**

- As a full stack developer of functional graph automation platform, designed and built front-end GUI with HTML, CSS and JavaScript to meet real users' requirements. Built server on google cloud with Python Flask to handle requests. This open-source management system is light and able to reuse data and calculations for large scale computation.
- Investigated on the performance of graph database, and replaced PostgreSQL with Neo4j as database of the platform, making the platform more than 10 times faster when dealing with over 100 millions nodes.

Research on Densest Subgraph Discovery in Uncertain Graph, Boston University **December 2017 - present**

- Designing approximation algorithms to solve densest subgraph discovery problem in uncertain graph in polynomial time. Used linear programming package GLPK on large-scale uncertain graph to achieve precise solution.
- Collected data from IMDB and constructed open-source uncertain graph datasets.

Detection and Classification of Android Malicious Software, Xi'An Jiaotong University **December 2014 - June 2017**

- Managed data collection of permissions and sensitive APIs used by 10000 malicious Android APP samples, de-compiled those Apps and analyzed the Manifest files as well as Smali codes.
- Investigated function-call relation graph in samples, and participated in discovery of sensitive subgraph structure.
- Cleaned API data and trained random forest model with both API features and sensitive subgraph features.

Achievements:

Publication: Frequent Subgraph based Familial Classification of Android Malware

➢ **Conference**: ISSRE 2016 **(Best Research Paper Award)**

Patent: Research on the Detection and Classification of Android Malicious Software
Patent Number: 2016105906327

Intern, Institute of e-Business, Software School of FuDan University **July 2016 - August 2016**

- Analyze user requirements of an education application named Sand Table for Hotel operation, and participated in Android client design and programming. The application was sold to hundreds of Colleges in China.
- Tested and maintained server and MySQL database.

Back-end Engineer Intern, Sichuan Chengdu Hwadee Co., Ltd **February 2016 - March 2016**

- Participated in second-hand online trading platform program and completed Enterprise level development.
- Designed database and realized model layer, used MVC model and applied iterative development.
- Applied Java Hibernate framework on MySQL.

COURSEWORK

Data Structure, Advanced Algorithm, Network, Data mining, Machine Learning, Cloud Computing, Compressive Sensing

COURSE PROJECT

International Cloud Transaction **January 2018 - May 2018**

- Together with startup company DocBox, set up Hadoop clusters on OpenStack cloud platform, managed PHI data using Hive and analyzed using Spark. The system realized privacy regulation required by DocBox and can detect false alarm in real time.

SKILLS

Programing language: C++, Java, JavaScript, SQL, Python, Git, HTML, CSS.
Machine learning: Matlab, TensorFlow, Python with numPy, Pandas, Sk-Learn, WEKA.
Cloud and distributed system: OpenShift with Docker and Kubernetes, OpenStack, Hadoop, Hive, Spark.