Xiao Yi

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EDUCATION

M.S. Computer Science w. Specialization in Data-Centric Computing, Boston University, Boston MA, January 2019.

B.E. Software Engineering, Xi'an Jiaotong University, Xi'an China, June 2017.

PUBLICATION

Z. Jia, C. Shen, X. Yi, Y. Chen, T. Yu and X. Guan, <u>Big-Data Analysis of Multi-Source Logs for Anomaly Detection on Network-based System</u>, CASE 2017, Xi'an China, August 2017.

C. Shen, Y. Li, T. Yu, S. Yuan, X. Yi and X. Guan, <u>Motion-Sensor Behavior Analysis for Continuous Authentication on Smartphones</u>, WCICA 2016, Guilin China, June 2016.

WORKING PAPER

N. Kostyuk, X. Yi, The Effect of the Internet of Contentious Politics in Authoritarian Regimes.

RESEARCH

Research Fellow, Harvard John A. Paulson School of Engineering and Applied Sciences, Cambridge MA   June 2018 - Present (Full-time since March 1, 2019)
Advisor: Prof. Boris Kozinsky

- **Fooga (Functional Object-Oriented Graph Automation) Platform**

  ❖ Applying Neo4j Graph Database and analyzing query performance over a million nodes comparing with Postgres;

  ❖ Developing the workflow engine, testing with popular machine learning packages (PyTorch, TensorFlow, Sklearn, etc.);

  ❖ Will be open-sourced soon.

Research Assistant, University of Michigan Ann Arbor Gerald R. Ford School of Public Policy, Ann Arbor, MI   October 2017 - Present (Part-time)
Advisor: Nadiya Kostyuk

- **The Effect of the Internet of Contentious Politics in Authoritarian Regimes**

- ❖ Analyzing the effect of the spread of the internet on contentious politics in authoritarian regimes;

- ❖ Data collection (static web scraping, stream data capturing), data pre-process, data analysis and visualization (geo-location and statistical presentation), codebook and literature review.

Research Assistant, XJTU MOE Key Lab for Intelligent Networks and Network Security, Xi'an China   January 2015 - January 2017
Advisor: Prof. Chao Shen, Prof. Tao Qin and Prof. Xiaohong Guan

- **DNS Software Passive Fingerprint Identification**

  - ❖ Analyzed BIND, Unbound and Windows Server's DNS resolution behavior and set up fingerprints;

  - ❖ Applied machine learning algorithms to identify the fingerprints of these software.

- **Big-Data Analysis of Multi-Source Logs for Anomaly Detection on Network-based System**

  - ❖ Built Hadoop and Spark cluster;

  - ❖ Wrote algorithms for password cracking and file privileges changing detection;

  - ❖ Set up log tags for fast log query using ElasticSearch;

  - ❖ Lead to the CASE 2017 paper.

- **Motion-Sensor Behavior Analysis for Continuous Authentication on Smartphones**

  - ❖ Analyzed smartphone users' authentication features based on smartphone's sensors;

  - ❖ Developed the authentication system on Android, which including capturing sensors data, running machine learning models and block unauthorized users access;

  - ❖ Lead to the WCICA 2016 paper.

PROJECT
Team Leader and Sever-end Developer, Link Studio, Xi'an China   November 2016 - Present
- ❖ Led team to develop XJTU-Link, a digital campus information system on both Android and iOS, which fulfill almost all the daily requirements in campus;

- ❖ Designed, developed and maintained the database and server-end;

- ❖ Adopted by XJTU Information and Data Center, with 10000+ users and 2000+ daily hits;

❖ Still maintaining the server and writing codes remotely, even graduated.

SKILL
Python, Java, C/C++, Matlab; MySQL, Neo4j, Hadoop, Spark; Machine Learning.

ENGLISH PROFICIENCY
TOEFL: 96 (R26, L26, S22, W22); Test Date: November 26, 2016.