ChenyuanWu

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Education

Beijing Jiaotong University (BJTU), School of Electronic and Information Engineering

- B.E.in Communication Engineering **Sep. 2016 – Jun. 2020(Expected)**
- General **GPA:3.93/4.00, Weighted Average Mark:92.9/100, Rank:1/330**
- Key Courses: Probability Theory and Mathematical Statistics 99, Complex Functions and Integral Transformations 100, Geometry and Algebra 100, Computer Networks 99, Principles of Communication Systems 97, Digital Signal Processing 98, Signals and Systems 99, Network Content Security (Principles of Machine Learning) A, Seminars on Information Network A, C Programming A, Advanced Programming Training (Data Structure) A-

Papers

1. Shaobo Wang, Hui Lyu, Jiachi Zhang, **Chenyuan Wu**, Xinyi Chen, Wenchao Zhou, Boon Thau Loo, Susan B. Davidson and Chen Chen, *Provenance for Probabilistic Logic Programs*, International Conference on Extending Database Technology (EDBT), 2020. Status: Accepted, **Best Paper Award**.
2. Haoxian Chen, **Chenyuan Wu**, Manqiu Zhang, Yahui Li, Zhijia Chen, Boon Thau Loo, Mayur Naik and Mukund Raghothaman, *Synthesizing Verifiable DSL Programs from SDN Controller Applications*, ACM SIGCOMM, 2020. Status: Submitted.
3. Anmin Xu, Delei Yu, Chuang Wang, **Chenyuan Wu**, Lili Liu, and Jinlong Li, *Rethink the Bandwidth-based Startup Mechanism of BBR-like CCAs*, IEEE Symposium on Computers and Communications (ISCC), 2020. Status: Submitted.

Awards and Honors

Chancellor's Scholarship in Beijing Jiaotong University (10 out of 15,000)	Nov.2019
Chinese National Scholarship	Sep.2019
Weinuo Times Scholarship	Sep. 2018
Chinese National Scholarship	Sep.2017
Second Prize in the National College Physics Competition	Dec. 2017
First Prize in the Mathematics Competition of Beijing Jiaotong University	Jun. 2017

Working Experience

Microsoft Research Asia

Research intern in ICE group ***Feb. 2020 – Present***

1. Learning and system co-design.

Huawei 2012 Labs, Central Research Institute

Research intern in Network Technology Lab ***Nov. 2019 – Jan. 2020***

1. Design and validate a mechanism for bottleneck routers to stabilize the network performance when long distance traffic meets short distance traffic.

2. Measure and analyze the performance of multipath transport layer protocols in heterogenous networks.

Research Experiences

Example-Driven Network Program Synthesis **July. 2019 – Sept. 2019**

Research Assistant, Network and Distributed System Lab, University of Pennsylvania; *Advisor: Prof. Boon Thau Loo*

Objective: We propose an interactive programming-by-example toolkit that synthesizes network-domain specific programs

from input-output examples based on numerical optimization and active learning; we are able to synthesize various SDN controller programs and distributed routing programs from example traces in three different Domain Specific Languages.

Provenance for Probabilistic Logic Programs — July. 2019 – Sept. 2019

Research Assistant, Network and Distributed System Lab, University of Pennsylvania; *Advisor: Prof. Boon Thau Loo*

Objective: We propose P3, a novel provenance model and system for debugging probabilistic logic programs; we enable four kinds of queries: traditional explanation queries, queries for finding the set of most important derivation within an approximate error, most influential queries, and modification queries that change the output probability with fewest modifications to input data or program.

Prostate Image Segmentation based on Machine Learning — Sept. 2018 – Feb. 2019

Independent Project, Institute of Intelligent Sensing and Information Processing (National Teaching Base for Electrical and Electronic Engineering), Beijing Jiaotong University; *Advisor: Prof. Yahui Peng*

Objective: I aimed to realize the separation of different tissue structures, especially the prostate tissue by using the method of Gaussian Mixture Model and the nearest neighbor method for multimodal images.

Prediction of Hot Spots based on PageRank Method — Oct. 2018 – Jan. 2019

Hot Spots: Specific locations with large network demand and operators should give priority of network speed and quality for these places.

Independent Project, Network Science and Computation Lab, Beijing Jiaotong University; *Advisor: Prof. Yuchun Guo*

Objective: I expected to get the prediction of potential hot spots on analyzing user communication data provided by China Unicom Operator.

Skills

Programming skills: Scala, Java, C++, Python, NDlog, Pyretic
Tools/Frameworks: PyTorch, Scikit-Learn, OpenCL, Floodlight, POX, Mininet, Rapidnet