

EDUCATION

Carnegie Mellon University - School of Computer Science <i>Master of Science, Computer Science</i>	Pittsburgh, PA 08/2018 – 12/2019
Peking University - School of EECS <i>Selected Courses: Distributed Systems, Deep Learning GPA: 3.85/4.0</i>	Beijing, China 09/2016 – 06/2018
Beijing University of Technology - College of Computer Science <i>Bachelor, Computer Science GPA: 3.93/4.0, Rank: 1/44</i>	Beijing, China 09/2012 – 07/2016

EXPERIENCE

Didi Chuxing <i>Algorithm Research Intern at Smart Mobility Group/AI Labs</i>	07/2017 – 07/2018
<ul style="list-style-type: none"> Designed a reinforcement learning based order dispatching strategy with Deep Q Network and pushed it online, which boosted global GMV by 0.5% - 5% in all experimental cities. Built an automated feature visualization pipeline with Hive on PySpark. 	
Microsoft Research Asia <i>Research Intern at Software Analytics Group, Leader of project BigIN4</i>	07/2015 – 07/2016
<ul style="list-style-type: none"> Proposed a novel algorithm for interactive approximate query processing on big data based on Tree Augmented Bayesian Network, and implemented it on Spark with Scala and Java. Deployed the platform to production cluster running on Hadoop, and analyzed more than 1TB data per day. 	

PROJECTS

Flappy Bird AI based on Deep Reinforcement Learning <i>Peking University Python, Tensorflow, Keras</i>	06/2017
<ul style="list-style-type: none"> Designed the network architecture to map raw pixel input to actions with Tensorflow. Implemented A3C algorithm from scratch, with asynchronous exploration and model updating using Python. 	
Parameter Server for Logistic Regression <i>Peking University C++, MPI, Protobuf</i>	06/2017
<ul style="list-style-type: none"> Designed the master-coordinator-worker architecture and the communication protocol with Protobuf. Implemented the architecture with MPI to support adding and removing workers dynamically. Implemented sparse parameter transmission to reduce messaging overhead. 	
Real-time Online Game: "Bomber Man Online" <i>Beijing University of Technology C++, Direct2D, IOCP, STL, Thread Scheduling</i>	04/2015
<ul style="list-style-type: none"> Designed the Client-Server architecture and the messaging protocol under IOCP. Implemented the game core from scratch and efficient game data access using STL with Visual Studio. Implemented lockstep multiplayer synchronization model with a mutex based thread scheduler. 	

PUBLICATION

Qingwei Lin, **Weichen Ke**, Jian-Guang Lou, Hongyu Zhang, Kaixin Sui, Yong Xu, Ziyi Zhou, Bo Qiao, Dongmei Zhang. "BigIN4: Instant, Interactive Insight Identification for Multi-Dimensional Big Data", **SIGKDD 2018**. (First Student Author)

HONORS

"Star of Tomorrow" Title for outstanding MSRA interns (Rate: 10%)	2016
Silver Medal of EC-Final Round of ACM-ICPC	2015
IBM Scholarship and National Scholarship (Rate: 3/125)	2014

SKILLS

Programming Languages: C++, Java, Python, Scala
Framework & Libraries: Hadoop, Spark, Hive, Tensorflow, Keras, XGBoost, Protobuf
Methods & Tools: Git, Latex, Linux
Technologies: Approximate Query Processing, Deep Reinforcement Learning, Blockchain