Wenzhao Li

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EDUCATION

University of Notre Dame, Indiana **Sep. 2015 - Present**
Ph.D. in Physics

Shanghai Jiao Tong University, Shanghai, China **Sep. 2011 - Jun. 2015**
B.S. in Physics

QUALIFICATION

Programming languages: Python, C++, Java, Bash, Pascal, Matlab (15 years programming experience and 10 years with Object-Oriented programming)

Proficiencies: Algorithms and Data Structures, Science Network, Cluster Computing, SQL, Distributed Computing, Machine Learning, Decision Tree, Linux, Statistics, Quantum Mechanics, Statistical Mechanics, Calculus

RESEARCH AND WORKING EXPERIENCE

PhD Software Engineer Intern, Facebook Inc., CA **June - Aug. 2020 & June - Aug. 2019**

- Worked on the Continuous Integration (CI) team and brought a state-of-the-art date driven log parsing algorithm to Facebook codebase. Built data pipelines for model training. Designed interface and created a service for the algorithm and integrated the infrastructure work into production.
- Built an internal tool for Facebook Community Ops (CO), which estimated the throughput of violating contents across Facebook products on Single Review Tool (SRT). Consumed internal data with SQL and used Python to simulate the job delivery process. Built a Thrift Service and a frontend with React and Hack to productionize the simulation.

Research Assistant, University of Notre Dame, IN **Jan. 2018 - Present**

- Worked on computer simulations for Vortex Matter in Type-II Superconductors.
- Used physics mathematical methods (Gradient Descent, Science Network, etc) to explore the Energy Landscape of Type-II Superconductors.
- Designed algorithms for optimizing computer simulations with Parallel Computing.

Data Researcher, CERN (European Organization for Nuclear Research)
Geneva, Switzerland **Jun. 2017 - Dec. 2017**

- Developed Event Selection Softwares and ran computing jobs over CERN Computing Cloud.
- Designed data taking solutions for Large Hadronic Collider (LHC), the largest Particle Collider in the world. Handled High Energy Physics data stream of size more than one million events per second.
- Studied Hight Energy Physics big data using various data mining and statistical modeling techniques including Machine Learning (Decision Tree), Cut-Based Selection technique, etc.

Research Assistant, University of Notre Dame, IN **Jun. 2016 - Aug. 2016**

- Helped develop University of Notre Dame Large Scale Opportunistic Distributed Computing software for High Energy Physics.
- Managed data with SQLite database. Developed Computing Resources Monitoring Tool using Python and HTML. Created e-mail notification service using Notre Dame e-mail server.
- Steadily ran 2,000 jobs on over 10,000 cores simultaneously on Notre Dame cluster and consumed over 4 million CPU-hours to produce simulation data for physics research.

AWARDS

First Prize of China National Olympic in Informatics **2008, 2010, 2011**

- Held by China Computer Federation, an annual national programming competition similar to ACM contest, targeting at picking out top programming students nationwide with solid understanding of algorithms and data structures.