

Yuping Lu

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TECHNICAL SKILLS

Programming languages: C/C++, Python, R, PHP, HTML+CSS+Javascript
Tools: PyTorch, Jupyter, NumPy, NetCDF, Docker, Git, LaTeX
HPC experience: ORNL CADES, LBNL NERSC

EXPERIENCE

Lawrence Berkeley National Laboratory (LBNL)

Berkeley, CA

Postdoctoral Scholar, the Advanced Light Source

2019 - present

- Improved multi-objective genetic algorithm for Lattice Optimization using Deep Learning.
- Achieved orders of magnitude speedup on HPC clusters.

Oak Ridge National Laboratory (ORNL)

Oak Ridge, TN

Graduate Research Assistant, the Atmospheric Radiation Measurement (ARM) Data Center

2017 - 2019

- Radar data (NEXRAD, ARM CSAPR) classification using convolutional neural networks.
- Detected outliers in streaming time series data from ARM distributed sensors.

Research Intern, the Scientific Data Group

- Scaling a PheWAS logistic regression R code on HPC clusters with pbdR tools using singularity container.
 - Implemented an R package [pbdADIOS](#) to connect R with ADIOS parallel middleware for I/O.
- Most functions in this package are implemented with C++.

Summer 2017

Summer 2016

University of Tennessee, Knoxville

Knoxville, TN

Graduate Research Assistant, the Office of Information Technology

2014 - 2017

- University web server configuration and optimization.
- Google Search Appliance administration and implementation.

Graduate Research Assistant, Dr. Michael A. Langston's lab

2013 - 2014

- Implemented an R package [biclique](#) to enumerate maximal bicliques.
- Developed [GrAPPA](#) which is a web interface built on the [Galaxy](#) framework (Python) for graph-based tools.

Whale Cloud, a leading BSS/OSS system vendor for the Telecom industry

Nanjing, China

Implementation Engineer, worked on two main projects

2011 - 2012

VTR OCS Project

Santiago, Chile

- Determined customer's business requirements and produced technical proposal.
- Responsible for communication with development & testing teams in China for correct and timely development of customer's requirements.

Perusat Wimax CvBS Operations & Maintenance Project

Lima, Peru

- Responsible to ensure smooth running of system.
- Performed daily system checks in order to maintain system health.
- Configuration of new price plans and business requirements into the system as required by commercial and marketing departments.

EDUCATION

University of Tennessee, Knoxville, TN

2013 - 2019

Ph.D. in Computer Science

Research Interests: [Machine Learning](#), [Graph Algorithms](#)

Dissertation: Advances in Big Data Analytics: Algorithmic Stability and Data Cleansing

Advisor: Dr. Michael A. Langston | GPA: 3.91

Nanjing Agricultural University, Nanjing, China

2007 - 2011

BEng in Computer Science

Advisor: Dr. Huanliang Xu | GPA: 3.64

Published several papers on Machine Learning and Graph Algorithms. Details can be found on yupinglu.me.