

Zhonghua Zheng

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Objective: Data Scientist Intern

Education

- **University of Illinois at Urbana-Champaign (UIUC)** Urbana, IL
Ph.D., Environmental Engineering; Computational Science and Engineering (concentration) 2020
- **University of Illinois at Urbana-Champaign (UIUC)** Urbana, IL
M.S., Agricultural and Biological Engineering (Thesis Option) 2016
- **Zhejiang University (ZJU)** Hangzhou, China
B.Eng., Biosystems Engineering (program ranking: Top 2 in China) 2015

Work Experience

- **Data Scientist Intern, Bayer** Champaign, IL
Machine Learning, Big Data, Geostatistics, Remote Sensing 09/2018 - 08/2019
– **Affiliation:** The Climate Corporation - Data Insights & Discovery Team
- **Graduate Assistant, Department of Computer Science** Urbana, IL
Course Administration, Communications 09/2018 - 05/2019
– **Duties:** Clerical Support, Technical/Support Services
- **Ph.D. Intern, National Center for Computational Sciences** Oak Ridge, TN
Deep Learning, Big Data, High Performance Computing 05/2018 - 08/2018
– **Affiliation:** Oak Ridge National Laboratory - Advanced Data and Workflow Group
– **Developed a deep neural network:** Implemented TensorFlow with Nvidia GPUs; Submitted two abstracts to professional conferences; Completed a technique report.
- **Data Scientist Intern, Monsanto Company / The Climate Corporation** Champaign, IL
Machine Learning, Spatial Analysis, Big Data 01/2018 - 05/2018
– **Achievements:** Got the summer intern (05/2018 - 08/2018) offer, Gave two oral presentations for team
– **Developed anomaly detection algorithms:** Implemented various machine learning (e.g., KNN) and anomaly detection (e.g., Isolation Forest) algorithms to detect anomalous field measurements.

Selected Projects Experience (Academic)

- **Machine Learning enabled coarse-grained modeling in Earth System Models (Artificial Intelligence, High-performance computing, Big Data)**
– Ph.D. dissertation research: Coupling Data Science and Numerical Simulations for Atmospheric Research; Outstanding Poster Award by School of Earth, Society, & Environment, UIUC
- **Evaluation of WRF parameterizations for air quality applications (Spatiotemporal Analysis)**
– Simulated meteorological parameters using Weather Research and Forecasting (WRF) model; Utilized Python/NCL and CyberGIS-Jupyter framework for geospatial analytics.
– Collaborated with the National Center for Supercomputing Applications/CyberGIS Center researchers.
- **Impedance-based moisture content sensor assessment (Experimentation, Data Analytics, Mathematical and Statistical Models Development)**
– Conducted sensors evaluation and chemical experiments; Developed mathematical models.
– Attended the professional conference and gave oral presentation; Published a peer-reviewed article in a top journal of agricultural engineering; Best student paper awarded by AOCABFE.
- **Developed a portable fogging device for disinfection with Slightly Acidic Electrolyzed Water (Data Analytics, Engineering Design, Leadership)**
– Served as a Student Principal Investigator for a project of National Training Program of Innovation and Entrepreneurship for Undergraduates (\$3,000) granted by Ministry of Education (China).

Technical Skills

- **Skills:** Python, TensorFlow, R, AWS, ArcGIS, MySQL, Spark, MATLAB, Bash, NCL
- **Ready Knowledge:** Machine Learning, Data Analytics, High Performance Computing
- **Miscellaneous:** Finalist, SMOKY MOUNTAIN Computational Sciences and Engineering Conference (SMC) Data Challenge, 2018; Deep Learning, a 5-course specialization by deeplearning.ai on Coursera.