

Yong Zhuang

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Research Interests

- I am interested in developing applied machine learning algorithms to solve real-world computational problems, mainly focused on Spatio-temporal analysis, time series forecasting, and feature selection.

Education

University of Massachusetts Boston

PH.D. IN COMPUTER SCIENCE

Boston, MA, U.S.

Sep. 2016 - PRESENT

University of Massachusetts Boston

MASTER IN COMPUTER SCIENCE

Boston, MA, U.S.

Sep. 2014 - Jun. 2016

Harbin Engineering University

B.E. IN COMPUTER SCIENCE

Harbin, Heilongjiang, China

Sep. 2001 - Jul. 2005

Computer Science or Relevant Experience

Knowledge Discovery Lab(Dr. Wei Ding)

RESEARCH ASSISTANT

Boston, MA, U.S.

Dec. 2014 - Present

- Design, build, and deploy Machine Learning applications to solve real-world problems empirically

Radial Analytics

NSF INTERN

Concord, MA, U.S.

Jun. 2019 - Nov. 2019

- Apply Machine Learning technologies in clinical data analysis to help hospital systems and physician networks deliver more efficient care to their patients, and to help patients better receive the necessary care, tailored to their individualized needs.

Liaoning Huiyin Science and Technology Ltd.

SOFTWARE ENGINEER

Anshan, Liaoning, China

Apr. 2011 - Mar. 2012

- Responsible for network application design, program structure design and guidance of junior staffs.

Liaoning Triexcel Co., Ltd.

SOFTWARE ENGINEER

Anshan, Liaoning, China

Mar. 2008 - Apr. 2011

- Responsible for multiple projects related to computer engineering. Participated in the design of several large-scale projects, which extensively broadened professional experience.

Publication

Mitigating Class-Boundary Label Uncertainty to Reduce Both Model Bias and Variance

ACM TRANSACTIONS ON KNOWLEDGE DISCOVERY FROM DATA, 2019

Matthew Almeida, Yong Zhuang,
Wei Ding, Scott Crouter, and Ping
Chen

Galaxy: Towards Scalable and Interpretable Explanation on High-dimensional and Spatio-Temporal Correlated Climate Data

IEEE INTERNATIONAL CONFERENCE ON BIG KNOWLEDGE, NOVEMBER 2018

Yong Zhuang, David Small, Xin Shu,
Kui Yu, Shafiqul Islam, and Wei Ding

Crime Hot Spot Forecasting: A Recurrent model with Spatial and Temporal Information

IEEE INTERNATIONAL CONFERENCE ON BIG KNOWLEDGE, AUGUST 2017

Yong Zhuang, Matthew Almeida,
Melissa Morabito, and Wei Ding

Long-lead prediction of extreme precipitation cluster via a spatio-temporal convolutional neural network

CI 2016. NCAR TECHNICAL NOTE NCAR/TN-529+PROC, SEPT 2016

Yong Zhuang and Wei Ding

pp. 128

An evaluation of big data analytics in feature selection for long-lead extreme floods forecasting

IEEE 13TH INTERNATIONAL CONFERENCE ON NETWORKING, SENSING, AND CONTROL (ICNSC)

Yong Zhuang, Kui Yu, Dawei Wang,
and Wei Ding

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Honors & Awards

FELLOWSHIPS

2016-2018 **Oracle Doctoral Research Fellowship**, Oracle Education Foundation

2019 **The Randall Gates Malbone Fellowship in Mathematics and Computer Science**, UMASS Boston

2019 **Graduate Research Internship Program**, National Science Foundation (NSF)

Teaching Experience

Artificial intelligence

CS 670

TEACHING ASSISTANT

Jan. 2017 - Dec. 2017

Jan. 2019 - Jun. 2019

Big data analysis

CS 697

TEACHING ASSISTANT

Jan. 2018 - Jun. 2018

Review

JOURNAL REVIEW

2017, IEEE Transactions on Knowledge and Data Engineering

TKDE

2018, 2019, ACM Transactions on Knowledge Discovery from Data

TKDD

2019, 2020, IEEE Transactions on Neural Networks and Learning Systems

TNNLS

2015, 2016, 2017, Knowledge and Information Systems

KAIS

2017, International Journal of Information Technology and Decision Making

IJITDM

2017, Journal of Ambient Intelligence and Smart Environments

JAISE

2017, Spatial Algorithms and Systems

TSAS

CONFERENCE REVIEW

2015, International Conference on Machine Learning

ICML

2016, 2017, 2018, 2019, 2020, 2021, Knowledge Discovery and Data Mining

KDD

2016, 2021, American Association for Artificial Intelligence

AAAI

2016, 2017, 2018, The IEEE International Conference on Data Mining series

ICDM

2019, 2020, ACM International Conference on Information and Knowledge Management

CIKM

2016, 2018, Pacific Asia Conference on Knowledge Discovery and Data Mining

PAKDD

2016, 2017, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases

ECML-PKDD

2016, The ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems

ACM SIGSPATIAL

2016, International Conference on Networking, Sensing and Control

ICNSC

2016, International Workshop on Climate Informatics

CI

Extracurricular Activity

Microsoft's AI for Earth summit

Redmond, WA

MEMBER

October 2018

- The AI for Earth Hackathon and Education summit.
- Web page: <https://www.microsoft.com/en-us/ai-for-earth/>

The Eighth Annual "Science Engineering Technology in the CITY"

Boston, MA

MEMBER

April 2016

- Use two interesting demonstrations, "Image Printing" (a program that allows computers to copy paintings) and "Style Transfer" (a program that can convert photos into paintings), to explain what a convolutional neural network is and how to implement it by python.
- Facebook page: <https://www.facebook.com/bostonareagirlsSTEM/>
- Web page: <http://www.bostongirlsstem.org/setinthecity/index.html/>

Tech Savvy 2016, 2017

Boston, MA

CORE MEMBER & INSTRUCTOR AT 2016

July 2016, 2017

- Worked with Boston University, Harvard, MIT, etc. to organize a one-week Tech-Savvy camp to prompt STEM education among Boston intermediate school students.
- Organized interactive games and talks to show these intermediate school girls what other people find valuable in the field of CS so they can have an accurate picture of what the field is.
- Facebook page: <https://www.facebook.com/bostonareagirlsSTEM/>
- Web page: <http://www.bostongirlsstem.org/techsavvy/index.html/>

Skills

- **Language:** Python, Java, ASP.NET, C#, PHP, JavaScript
- **ML Packages:** Tensorflow, Keras, Pytorch, Matplotlib, Pandas, Numpy, scikit-learn, seaborn
- **Database:** Oracle, Access, Microsoft SQL Server, MySQL
- **ArcGIS:** Map, Server, SDE and Desktop
- **Advanced skills** Design Patterns, MVC, CSS, JQuery, AJAX