Mike Izbicki

About Me

I study machine learning theory, with an emphasis on multilingual natural language processing of large scale social media data.

Email: mike@izbicki.me
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Academic Appointments

Assistant Professor	Claremont McKenna College, USA	2019-
Postdoc	University of California Riverside, USA	2017-2019
Visiting Professor	Pyongyang University of Science and Technology, DPRK	2015-2016
Lecturer	University of California Riverside, USA	2013-2015

Military Experience

Midshipman (2004-2008), Ensign (2008-2011). Engineering Officer of the Watch for S5W nuclear reactor. Assistant Security Officer for Naval Submarine School.

Education

University of California Riverside 2011-2017
PhD, Computer Science
Advisor: Christian R. Shelton

Thesis: Divide and Conquer Algorithms for Machine Learning

Johns Hopkins University 2008
MS, Computer Science

United States Naval Academy 2004-2008
BS, Computer Science

Publications

Peer reviewed conference papers:

1. Yujie Wang, Mike Izbicki. "Tree Loss: Improved Generalization with Many Classes" AISTATS, 2022.

2. Mike Izbicki, Vagelis Papalexakis, Vassilis Tsotras. "Geolocating Tweets Written in Any Language Sent from Any Location." Conference on Information and Knowledge Management (CIKM), 2019.

3. Mike Izbicki, Vagelis Papalexakis, Vassilis Tsotras. "Exploiting the Earth's Spherical Geometry to Geolocate Images," European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (ECML/PKDD), 2019.

4. Mike Izbicki, and Christian Shelton. "Communication-Efficient Distributed Maximum Likelihood Estimation with the Optimal Weighted Average," European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (ECML/PKDD), 2019.

5. Mike Izbicki, Sajjad Amini, Christian Shelton, and Hamed Mohensian-Rad. "Identification of Destabilizing Attacks in Power Systems" American Controls Conference (ACC), 2017.

6. Mike Izbicki, Christian Shelton. "Faster Cover Trees," International Conference of Machine Learning (ICML), 2015.

7. Mike Izbicki. "Algebraic classifiers: a generic approach to fast cross-validation, online training, and parallel training," International Conference of Machine Learning (ICML), 2013.

Peer reviewed workshop papers:

1. Mike Izbicki. "Aligning Word Vectors on Low-Resource Languages with Wiktionary," Workshop on Technologies for Machine Translation of Low-Resource Languages (LoResMT), 2022.

2. Mike Izbicki. "Reddit Bot," Nifty Assignments at SIGCSE, 2022.

3. Nathan Stringham and Mike Izbicki. "Evaluating Word Embeddings on Low-Resource Languages," Proceedings of the First Workshop on Evaluation and Comparison of NLP Systems, 2020.

4. Stefanos Stoikos and Mike Izbicki. "Multilingual Emoticon Prediction of Tweets about COVID-19," Proceedings of the Third Workshop on Computational Modeling of People's Opinions, Personality, and Emotions in Social Media, 2020.

5. Mike Izbicki, Christian R. Shelton. "Distributed Learning of Neural Networks with One Round of Communication." Distributed Machine Learning at the Edge (DMLE), 2019.

6. Mike Izbicki, Evangelos Papalexakis and Vassilis Tsotras. "The MvMF Loss for Predicting Locations on the Earth's Surface." MAChine Learning for EArth ObservatioN (MACLEAN), 2019.

7. "Open Sourcing the Classroom." International Conference of the Pyongyang University of Science and Technology (IcoPUST), 2015.

8. "HLearn: a machine learning library for Haskell." Trends in Functional Programming (TFP), 2013.

9. "The open source software package HLearn." Workshop on Machine Learning Open Source Software (MLOSS), 2013.

Non-peer reviewed articles:

1. Amir Feghahati, Mike Izbicki. "Automatic Discovery of Language Dialects via Explainable Machine Learning." Southern California Symposium on Natural Language Processing (SoCalNLP), 2019.

2. Oscar Hernandez, Mike Izbicki. "Zero Shot Sentiment Analysis on Tweets in Any Language." Southern California Symposium on Natural Language Processing (SoCalNLP), 2019.

3. Rany Tith, Mike Izbicki. "Word Vectors for 244 Countries from Tweets for 300 Spanish Dialects Using Factored Multiskipgram Model." Southern California Symposium on Natural Language Processing (SoCalNLP), 2019.

4. "Merging Neural Networks." Presented at SoCalML, August 2017.

5. "Open Sourcing the Classroom." Graduate student research competition at SigCSE 2016. Received 3rd place award.

6. "Bashing Haskell: Reimplementing Haskell's Parsec Library in the Unix Shell." SigBOVIK 2015.

7. "Two monoids for solving NP-complete problems." The Monad Reader, 2013.

Non-peer reviewed presentations:

1. "Geolocating Tweets Written in any Language Sent from Anywhere in the World." UCR Data Science Center Seminar, February 2019.

2. "Faster Cover Trees." Presented at CalState Fullerton, August 2016.

3. "Modeling data with algebra." Workshop on Data Centric Programming (DCP), 2014.

4. "Machine learning? Why not monoids?" Presented at Facebook, September 2013.

Teaching

Lecturer at Claremont McKenna College (CMC) for:

Data Mining	Fall 2022
Computing for the Web	Fall 2022
Big Data	Spring 2022
Computing for the Web (2 Sections)	Fall 2021
Big Data	Spring 2021
Data Structures	Spring 2021
Data Mining	Fall 2020
Computing for the Web	Fall 2020
Deep Learning	Spring 2020
Data Structures	Spring 2020
Data Mining	Fall 2019
Computing for the Web	Fall 2019

Lecturer at the Pyongyang University of Science and Technology (PUST) for:

Open Source Machine Learning Software (graduate level)	Fall 2016
Algorithm Design	Fall 2016
Algorithm Design	Fall 2015
Discrete Math	Fall 2015

Lecturer at the University of California Riverside (UCR) for:

Software Construction	Spring 2015
Software Construction	Winter 2015
Software Construction	Fall 2014
Software Construction	Summer 2014
Introduction to the World Wide Web	Winter 2014
Intermediate Data Structures and Algorithms	Fall 2013
Introduction to Data Structures	Spring 2013

Teaching assistant at UCR for:

Software Construction	Spring 2014
Introduction to Computer Science II	Winter 2013
Introduction to Computer Science I	Fall 2012
Computer Security	Fall 2012

Awards

1. US Congressional and California Assembly Recognition awards for contributing to peace on the Korean peninsula through computer science education (2018)
2. SIGCSE graduate student research competition, 3rd place (2016)
3. UCR Dean's Fellowship (2011)
4. Naval Nuclear Propulstion Training Command (NNPTC) Honor Graduate (2009)
5. Naval VGEP Fellowship (2008)

Other Activities

1. Coach for UCR's International Collegiate Programming Competition (ICPC) team (2014-2015)
2. Team leader for CodeAvengers summer camp for elementary and middle schoolers (2013)