Bora Ozaltun

CONTACT INFORMATION

77 Massachusetts Avenue
Cambridge, MA 02139

(312) 450-4993
ozaltun@mit.edu

RESEARCH INTERESTS

Energy and Environmental Economics, Remote Sensing, Machine Learning

EDUCATION

Massachusetts Institute of Technology

Dual M.S Candidate, Technology and Policy, Computer Science (expected graduation date: June 2020); Research Advisor: Christopher R. Knittel

University of Illinois at Urbana Champaign

B.S., Civil and Environmental Engineering, June 2013

HONORS AND AWARDS

MIT Energy Fellow, 2017-2019

University of Illinois: Graduated with Honors, Deans List 2013-2017, Wayne C. Teng Scholar

RESEARCH EXPERIENCE

MIT Center for Energy and Environmental Policy Research — Cambridge, MA

Research Assistant — **August, 2017 - present**

- Analyzing and modeling the relationship between natural gas and coal prices to observe the change in mortality surrounding power plants. Using Python and R to determine a causal relationship between energy pricing and mortality surrounding power plants.
- Creating a network of fossil fuel trade data. Using complex network science methods to understand connectivity as well as clustering in the networks with an emphasis on the effects of hydraulic fracturing.
- Using machine learning and statistical methods to create incentives for electricity consumers with the objective of creating more synchronization between electricity generation and consumption in Massachusetts.

Bond Research Group — Champaign, IL

Research Assistant — **January 2016- July 2017**

- Created a mathematical model utilizing Python and ArcGIS to create a high resolution global degree-day inventory from reanalysis data, in order to enhance residential energy projections in rural areas for 30 years.
- Executed data analysis on R to explore and examine the relationship between location, heating degree day, population, topography, and residential energy usage to further investigate the effect different variables can have on the magnitude of energy.

Uncertainty Quantification Group — Champaign, IL

Research Assistant — **June 2015- January 2016**

- Worked on creating a flexible markov model predicting bridge deterioration in matlab.

PROFESSIONAL EXPERIENCE

Thomson Reuters Labs, — Boston, MA

Machine Learning Intern — **January 2019- February 2019**

Produced promising results using LSTM based RNNs in PyTorch to classify a given paragraph. Worked on prediction models to predict the number of property tax protests for the coming fiscal year in a given county.

Revelator Jerusalem, Israel

Data Science Intern **May 2018- August 2018**

Created a data warehousing system for mining social media data of artists on a daily schedule using AWS and Python. Worked on a framework to predict an artists track release success based on daily data from Spotify and iTunes using an LSTM network. Utilized this model to value assets for daily secure payments through a crypto wallet.

Conferences

International Development Strategy Forum for Clean Fuel Beijing, China

Project Lead **May 2016- July 2016**

Organized an international conference, sponsored by the Chinese Ministry of Science and Technology within Beijing for over 100 participants, for government officials and researchers from US and China to explore the future of clean fuel.

Skills

Programming languages (in order of familiarity): Python (PyTorch, TensorFlow/Keras, SciKit-learn, StatsModels, Numpy, Pandas, Matplotlib, Seaborn), C++/C, Java, R, Matlab, Julia, Stata

Other Computer Skills: AWS (Lambda, EC2, S3, DynamoDB), Git/Github, LATEX, Tableau

Other skills: English (native), Turkish (native), German (basic)