Eric Gentry
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Education

University of California, Santa Cruz 2014 — June 2019
PhD Candidate; Astronomy & Astrophysics with an Emphasis in Statistics

Graduating June 2019

Selected coursework: Advanced Machine Learning (Winter 2018), Bayesian Statistical Modeling (Spring 2016), High Performance Computing (Spring 2015)

Massachusetts Institute of Technology 2010 — 2014
BS; Physics (*GPA:* 4.9/5.0)

Work Experience

Microsoft Summer 2018
Data Science Intern

- Building unsupervised deep learning models to identify the key differences between natural language corpora (tensorflow)
- Designing interpretable, online models to predict future search volume (scikit-learn)

UCSC Astronomy & Astrophysics 2014 — 2019
NSF Graduate Research Fellow

- Developed conditional Generative Adversarial Network (cGAN) to create synthetic galaxy images to augment training of other neural networks (tensorflow) 2018
- Built image classifier using Convolutional Neural Networks and Random Forests to identify dwarf galaxies (Python, keras) 2017
- Published Bayesian statistical analysis of supernova simulations 2016
- Extended distributed software for simulating supernovae (C/C++) which scales well to at least 1000 cores and has run for over 250,000 CPU hours 2015

LendUp (consumer lending startup) Summer 2017
Data Science Intern

- Predicted risk of credit card applicants using statistical modeling (Python, SQL)
- Engineered new features to extract insights from previously unused data
- Performed exploratory data analysis to support new product development
- Identified and created ETL solutions for the unmet needs of other teams

MIT Kavli Institute for Astrophysics 2013 — 2014
Undergraduate Researcher

- Discovered and published faint signals of a galactic jet in noisy imaging data (Python)

Universität Heidelberg – Institute of Environmental Physics Summer 2012
Visiting Research Fellow

- Extended and optimized data pipeline to detect trace atmospheric gases

Tools

Python, tensorflow, keras, C++/C, SQL, R, scikit-learn

Selected Awards

NSF Graduate Research Fellow 2016 — 2019
- $138,000 award supporting my PhD research; 2,000 fellows selected from 17,000 applicants

Osterbrock Prize Leadership Fellow (UC Santa Cruz) 2015 — 2018
- $5,000 award with continued mentoring to develop technical leadership skills