Eric Gentry
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Education

University of California, Santa Cruz 2014 — 2019
PhD; Astrophysics with an Emphasis in Statistics (*GPA*: 4.0/4.0)

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

Amazon — Sponsored Brands 2020 —
Applied Scienctist II

- Created a model to predict the most popular brands for any search query 2020
- Built DNN-based model for inferring whether a query is generic or brand-specific 2021

Microsoft — Web Experiences Team (Search, Ads, Shopping) 2019 — 2020
Data & Applied Scientist

- Built a content-aware product recommender using deep neural networks combining text, images and attribute graphs into a single embedding (tensorflow) 2020
- Created novel training sets from existing user logs, introducing new multi-task DNN methods to supplement existing model training pipelines with these data 2020
- Created boosted decision tree models for ad click prediction 2019

UCSC Astronomy & Astrophysics 2014 — 2019
NSF Graduate Research Fellow

- Designed conditional Generative Adversarial Networks (cGANs) that create new galaxy images to augment training of neural nets (Python, tensorflow) 2018
- Built image classifier using Convolutional Neural Networks and Random Forests to identify rare dwarf galaxies (Python, keras, scikit-learn) 2017
- Extended distributed software for 3D supernova simulations (C, C++) that scales well to at least 1000 CPUs and ran it for over 250,000 CPU hours. Published detailed analysis of a few key simulations ran by this code. 2016 2018
- Published Bayesian statistical analysis of hundreds of supernova simulations 2016

Microsoft Summer 2018
Data Science Intern

- Built clustering models on top of deep representations to identify structure in the differences between natural language datasets (Python, tensorflow)
- Designed online, unsupervised anomaly detection models (Python)

LendUp (consumer lending startup) Summer 2017
Data Science Intern

- Predicted risk of credit card applicants using statistical modeling (Python, SQL)
- Performed exploratory data analysis to support new product development

Tools

Python, tensorflow, keras, pyspark, SQL, pytorch, scikit-learn, C++/C

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