Steven Boada, Ph.D

Basic Information	(615) 200–0119	github.com/boada
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Professional Experience

Activision Publishing, Inc. — Boulder, Colorado
Senior Machine Learning Engineer — **January, 2021 – Present**
- Lead the transition of ML infrastructure from AWS to GCP/GCS.
- Worked with other data science team members to productionalize models. This includes writing automated build pipelines and shared libraries, ML model versioning with MLflow, and automated testing tools to ensure model stability.
- Trained ML models to provide insights into customer conversion, churn, and behavioral segmentation. This leveraged survival analysis, clustering, as well as tree–based and linear methods.
- Interviewed potential new hires, and trained/mentored new team members and junior staff.

Insight Data Science — New York, New York
Fellow — **January, 2020 – 2021**
- Helped optimize the way NYC health inspectors perform restaurant inspections in order to reduce the time critical health violations remain unaddressed.
- Trained a random forest in Python to prioritize NYC restaurant inspections based on environmental variables and their past inspection histories and provided the results to NYC through an API deployed on AWS.
- Resulted in NYC inspectors identifying ∼2.5% more violations in the first half of an inspection window, leading to critical violations being discovered up to 7 days earlier than by the current approach implemented by NYC.

Dept. of Physics and Astronomy, Rutgers University — New Brunswick, New Jersey
Postdoctoral Research Associate — **September, 2016 – 2021**
- Designed and built parallelized pipelines to process and analyze TBs of astronomical imaging; producing calibrated, standardized data catalogs and rigorous results leading to 2 peer reviewed publications and several hundred hours of telescope time.
- Project managed and coordinated a team of 4, including both senior scientists and graduate students, to perform quality control tasks; deliver science products; and produce peer–reviewed publications.
- Contributed to open source, astronomy–focused, Python projects through bug fixes and feature additions: see photometrypipeline, astLib, and easyGalaxy on GitHub as examples.

Dept. of Physics and Astronomy, Texas A&M University — College Station, Texas
Ph.D Candidate — **August, 2010 – 2016**
- Demonstrated that measurements from a planned large observation campaign could be improved by up to a factor of 3 over traditional statistical methods through the use of machine learning.
- Implemented these machine learning methods and produced reliable results in a pilot survey of the real sky and under real–world conditions.

Awesome Projects

Using Imaging to Infer Galaxy Properties
- Predicted galaxy chemical composition with ∼5% error from pseudo–three color imaging, a result better than other current, similar efforts in the literature. Leveraged CNNs to analyze ∼150,000 images of galaxies.
- Project start to publication: 4 months (typically ∼1.5 years). See: github.com/boada/galaxy-cnns.

Skills

Machine Learning: Linear Models, Decision Trees, SVM, Clustering, Deep Learning, Survival Analysis
CI/CD: Jenkins, Airflow, Docker
Software and Computing: Open Source Contributor, Python, DataBricks, MLFlow, SQL, AWS/GCP, and other cloud computing applications
Leadership: Experience organizing and leading workshops and collaboration meetings, Teaching and mentoring junior team members, Eagle Scout.

Education

Texas A&M University, College Station, Texas
- Ph.D, Physics (astronomy focus), 2016

The University of Tennessee, Knoxville, Tennessee
- M.S., Physics (astronomy focus), 2009
- B.S., Physics, 2007