

Employment

Senior Data Scientist **Noodle Analytics** **July 2021 – Present**

- Senior Data Scientist improving supply chain efficiency by applying machine learning to demand forecasting.
- **Engineering Manager for Customer Deployment** (2023). Led a team of data scientists, data engineers, and UI analysts to deploy the demand forecast product for a large customer.
- **Developed Core ML Product** (2022). Implemented enhancements to the demand forecasting product including adding prediction intervals, SHAP values, and cross-temporal reconciliation for additional interpretability.

Research Associate **SLAC National Accelerator Lab.** **August 2020 – July 2021**

- Postdoctoral Researcher in the Machine Learning Initiative.
- Pipeline Scientist for the Rubin Observatory LSST Dark Energy Science Collaboration (DESC).
- Explored data science and machine learning for science with the upcoming Rubin Observatory.
- Co-led the Supernova Machine Learning Topical Team in an international collaboration.
- **Deep Learning with a Transformer** (2021). Created a deep learning model using the Transformer architecture traditionally used for NLP to classify transient objects. Python/Tensorflow

Data Science Fellow **University of California Berkeley** **September 2017 – August 2020**

- Postdoctoral Researcher at the Berkeley Center for Cosmological Physics under Saul Perlmutter.
- Maintained a data reduction pipeline hosted on a high performance computing center.
- **Supernovae and Galaxy Correlations** (2020). Determined the statistical significance of a correlation between Type Ia Supernovae in the near infrared and their host galaxies using model regression. Python

Education

Coursera: Machine Learning, Deep Learning Specialization, MLOps Specialization

Pittsburgh, PA **University of Pittsburgh** **August 2012 – August 2017**

- Ph.D. (August 2017) and M.S. (April 2014) in Physics.
- Relevant Coursework: Computational Methods in C++, Astronomical Techniques (strong focus on statistics).
- Co-President of the Association of Physics and Astronomy Graduate Students
- **Bayesian Modeling of Systematics** (2016). Implemented a Gaussian Mixture Model in a Bayesian framework to determine biases on cosmological parameters from missing data correlations. Python on HPC center.

Athens, GA **University of Georgia** **August 2009 – May 2012**

- B.S in Physics and Astronomy, May 2012.
- Relevant Coursework: Computational Physics in Fortran.
- Awarded the Linville L. Hendren Memorial Scholarship for Outstanding Proficiency in Physics

Languages and Technologies

- Python (expert); Git (proficient); Unix (proficient); Docker (proficient); R (prior experience), SQL (prior experience); SageMaker (prior experience), Kubeflow (prior experience), C++ (prior experience); C (prior experience); Fortran (prior experience);
- Python Packages: Numpy, Scipy, Matplotlib, Tensorflow, Scikit-learn, Pandas

Skills

- Machine Learning, Deep Learning, Data Visualization, Model Fitting, Data Manipulation/Cleaning
- Working in Collaborations and Independently, Leadership, Communication, Creative Thinking