Nathaniel Price

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Education

2016 **Joint Ph.D. Mechanical Engineering** — University of Florida
Gainesville, Florida, US and Saint-Étienne, Rhône-Alps, France — École des Mines de Saint-Étienne

2014 **Graduate Certificate in Scientific Computing** — University of Florida
Gainesville, Florida, US

2014 **M.S. Mechanical Engineering** — University of Florida
Gainesville, Florida, US

2012 **B.S. Mechanical Engineering** — University of Florida
Gainesville, Florida, US

Experience

Sep 2016 - present **Data Scientist** — University of Nebraska-Lincoln
Lincoln, Nebraska, US

- Developed new method to predict customer retention and purchase probabilities with individual level granularity (applied to 1.2 million purchase records)
- Designed, developed, and deployed web-based data analysis application in R for exploratory data analysis of SQL customer database

Oct 2014 - Mar 2016 **Ph.D. Student Researcher** — ONERA - The French Aerospace Lab
Palaiseau, Île-de-France, France

- Developed a novel method for optimal design of sounding rocket under uncertainty that incorporated risk of future redesign into design optimization

Aug 2012 - Jul 2016 **Graduate Research Assistant** — University of Florida
Gainesville, Florida, US

- Integrated machine learning (e.g., Gaussian process) and optimization to design engineering systems considering uncertainty in future decision making process
- Collaboratively developed optimization-based solution to The NASA Langley Multidisciplinary Uncertainty Quantification Challenge (2014)

Sep 2011 - Aug 2012 **Undergraduate Research Assistant** — University of Florida
Gainesville, Florida, US

- Analyzed effects of patient variability and design variations on safety of Biomet rigid sternal fixation device (Python, FEA)
- Awarded Biomedical Engineering Society (BMES) Design and Research Award and Knox T. Millsaps Outstanding Undergraduate Paper Award

Aug 2010 - Jan 2011 **Launch Engineer Intern** — SpaceX
Cape Canveral, Florida, US

- Performed maintenance of launch vehicle ground systems
- Team member for rollout and launch of Falcon 9 and Dragon spacecraft

Software

1. Price, N, C Chizinski, and J Burnett (n.d.). *radsets - An R Package for creating Radial Sets diagrams*. https://natbprice.github.io/radsets/.
2. Price, N and J Burnett (n.d.). *tvdiff - An R Package for performing total variation regularized differentiation*. https://github.com/natbprice/tvdiff.

Data Science Skills

Communication: presentations (technical and non-technical), dashboard design, data analysis reports, scientific publications, data visualization
Programming Languages: R, Python, SQL, Matlab, C++
Software Development: version control, automated testing, continuous integration
Numerical Methods: optimization (stochastic, genetic, multi-start), numerical solution of differential equations
Statistics: machine learning, data analysis, generalized linear regression, cluster analysis, factor analysis, principal components analysis, cross validation, model selection, generalized additive models, data analytics, Monte Carlo simulation