

# Nathaniel Price

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## Education

2016	<b>Joint Ph.D. Mechanical Engineering</b> Gainesville, Florida, US and Saint-Étienne, Rhône-Alps, France	University of Florida École des Mines de Saint-Étienne
2014	<b>Graduate Certificate in Scientific Computing</b> Gainesville, Florida, US	University of Florida
2014	<b>M.S. Mechanical Engineering</b> Gainesville, Florida, US	University of Florida
2012	<b>B.S. Mechanical Engineering</b> Gainesville, Florida, US	University of Florida

## Experience

Sep 2016 - present	<b>Data Scientist</b> Lincoln, Nebraska, US	University of Nebraska-Lincoln
	<ul style="list-style-type: none"><li>• Developed new method to predict customer retention and purchase probabilities with individual level granularity (applied to 1.2 million purchase records)</li><li>• Designed, developed, and deployed web-based data analysis application in R for exploratory data analysis of SQL customer database</li></ul>	
Oct 2014 - Mar 2016	<b>Ph.D. Student Researcher</b> Palaiseau, Île-de-France, France	ONERA - The French Aerospace Lab
	<ul style="list-style-type: none"><li>• Developed a novel method for optimal design of sounding rocket under uncertainty that incorporated risk of future redesign into design optimization</li></ul>	
Aug 2012 - Jul 2016	<b>Graduate Research Assistant</b> Gainesville, Florida, US	University of Florida
	<ul style="list-style-type: none"><li>• Integrated machine learning (e.g., Gaussian process) and optimization to design engineering systems considering uncertainty in future decision making process</li><li>• Collaboratively developed optimization-based solution to The NASA Langley Multidisciplinary Uncertainty Quantification Challenge (2014)</li></ul>	
Sep 2011 - Aug 2012	<b>Undergraduate Research Assistant</b> Gainesville, Florida, US	University of Florida
	<ul style="list-style-type: none"><li>• Analyzed effects of patient variability and design variations on safety of Biomet rigid sternal fixation device (Python, FEA)</li><li>• Awarded Biomedical Engineering Society (BMES) Design and Research Award and Knox T. Millsaps Outstanding Undergraduate Paper Award</li></ul>	
Aug 2010 - Jan 2011	<b>Launch Engineer Intern</b> Cape Canveral, Florida, US	SpaceX
	<ul style="list-style-type: none"><li>• Performed maintenance of launch vehicle ground systems</li><li>• Team member for rollout and launch of Falcon 9 and Dragon spacecraft</li></ul>	

## 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 (PCA), cross validation, generalized additive models, data analytics, Monte Carlo simulation