

## Employment

- Oct. 2015 – Sept. 2016 **Machine Learning Engineer**, Nexosis, Inc., Columbus, Ohio.  
Designed machine learning algorithms in Python, R, and Julia and implemented them in a proprietary machine learning platform. These machine learning algorithms range from simple ARIMA and Exponential Smoothing models to more advanced Kalman Filtering models, Hidden Markov models, Recurrent and Convolutional Neural Networks, Markov Decision Processes, and Bayesian Structural Time Series. Combining these algorithms with insightful data visualizations driven by a holistic understanding of the business empowered our clients with the ability to reliably and consistently forecast different elements of their business such as inventory demand, staffing, and promotion impact. Responsibilities include researching and developing advanced machine learning and statistical methods; mentoring and growing Data Scientists; selling to potential clients and creating white papers for marketing; presenting and communicating complex analyses to non-technical persons; and attending the Techstars-Target accelerator program in Minneapolis, Minnesota to help develop the company and refine the product.
- Jul. 2013 – Oct. 2015 **Data Scientist**, Farsite, now Advanced Analytics division of ICC, Columbus, Ohio.  
Converted client data into profitable, actionable insights through analysis and statistical learning techniques. These insights help clients better understand key drivers of their business and influence corporate strategy in marketing, real estate, operations, and pricing. Architected and developed an end-to-end Business Analytics suite that provides scalable data science solutions and a rigorous, disciplined process for doing Advanced Analytics. Responsibilities included researching and developing Big Data tools and statistical methods; mentoring junior level Data Scientists; providing company training in R and Python; and performing data analysis through statistical learning and machine learning techniques.

## Education

- May 2013 **Bachelor of Arts in Mathematics & Statistics**, Ohio Wesleyan University, Delaware, Ohio.

## Skills

**Soft:** Can easily abstract and communicate important technical concepts and details to non-technical personnel. Easy-going and described as being fun to work with.

**Statistical Software:** Strong competency in Python, R, Julia, Scala, and Lua; competent in SAS, Spark, and Hadoop. Strong competency in data visualization tools such as Tableau and D3.js and Agile software development best practices such as Git, Jira, and Scum.

**Programming Languages:** Competent in Shell, C, C++, Perl, Ruby, Go, and Javascript.

**Machine Learning Tools:** Strong competency in Lasagne, Keras, Theano, Tensorflow, PyMC, Stan, Statsmodels, Pandas, Numpy, Scikit-Learn, and many other open source ML/AI tools and frameworks.

**Infrastructure:** Strong competency in networking and infrastructure such as databases and servers; especially strong competency in Amazon Web Services infrastructure such as S3, EC2, VPC, Elastic MapReduce, Redshift, RDS, and DynamoDB.

## Client Projects

### R&D of Business Analytics end-to-end suite

Main contributor to an internal R&D effort to develop an end-to-end Business Analytics suite. This suite will accelerate the data science project lifecycle and empower clients with the ability to quickly host data, access scalable analysis tools, collaborate, and develop their internal analysts through a

contextualized workforce development curriculum. My core responsibilities include architecting this suite using Amazon Web Services infrastructure, researching Big Data tools and applications, and creating material for a data science curriculum to develop clients' workforce.

### **Real Estate Site Selection Analysis**

Contributor to a real estate site selection analysis project, along with Dr. Ryan McClarren and Ian Petruziello, for several clients in the retail and C-store industry. These clients sought to evaluate where to place new store locations in existing markets and new geographies. Our analysis focused on identifying key driver of sales and building models that forecasted sales for candidate locations to increase confidence in new site selection decisions and enhance the speed of the site selection process. Our team made the insights of this analysis actionable by developing several web applications implementing the models, thus endowing the clients' real estate teams with the ability to select potential locations, receive forecasts, and understand key drivers of those forecasts.

### **Sales Analysis and Test & Learn**

Contributor to a sales analysis project, along with Dr. Chris Holloman and Ian Petruziello, for a client in the casual dining industry. Our team executed a quantitative analysis to uncover key drivers of sales as well as propose test and control groups for additional experiments. Upon execution of these experiments, our team successfully conducted analyses to uncover why a certain subset of the test group did not respond as well.

### **Media Mix Optimization**

Contributor to a media mix optimization project, along with Dr. Ryan McClarren, for a client in the retail industry. Our team performed an analysis to determine which channels the client should devote the most time and money so as to increase revenue from more effective allocation of resources, enhance planning capabilities with deeper insights into the relationships, and provide justification to upper management for marketing resources.

### **Weather Analysis**

Contributor to a weather analysis project, along with Dr. Ryan McClarren, for a client in the emergency life-flight industry. Our team worked to develop a set of models that assisted the client in performing more sophisticated business planning and served to inform pilots when they should fly in certain weather conditions.

## **Publications**

- Mar. 2014 **P. Hendricks**, I. Petruziello, T. Hargro, J. Loehrke, "Oscars 2014: See who the big winners thank first", *USA Today*, March 03, 2014. <http://usat.ly/1sLhYS0>
- May 2014 **P. Hendricks**, I. Petruziello, K. Kepple, J. Dionise, L. Deutsch, K. Lopez, "Your ultimate music festival survival guide", *USA Today*, May 19, 2014. <http://usat.ly/1j1vIY0>

## **Extracurriculars**

- 2009-2013 OWU Men's Varsity Soccer, Captain 2011-13.
- 2012-2013 Phi Gamma Delta fraternity, Founding President.
- 2014-Present Columbus useR Group, Organizer.
- 2014-Present Columbus Data Science Meetup Group, Organizer.

## **References**

Available upon request.