

# Ryan Bieber

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## Summary

Data Scientist with a hunger for learning and a passion for finding/solving problems with creative solutions.

## Experience

IBM, Data Science & Technology, Finance. Rochester, MN. 07/2019 – Present

### **Squad Lead Data Scientist**

- Developed and implemented a modelling application inside a docker image that was pushed to a kubernetes cluster in a CI/CD fashion so we had an end-to-end solution with minimal, if any, human intervention.
- Pioneered cloud deployment solutions on the team of more than 30 people and became the leading expert in Docker/Kubernetes in the DS&T organization. Using these methods, I was able to cut down on development and deployment significantly.
- Mentored and helped teach data science fundamentals along with best practices in programming to my squad of 7 people.
- Implemented an API that helped improve process management for over 10,000+ people by tracking their tasks every day and being able to visual those inside a dashboard.
- Utilized various machine learning techniques to create a time-series forecasting package that the organization used to forecast 40% of IBM's revenue.
- Helped create and deploy a django application that sent out surveys that we then used NLP on to analyze how peoples moods changed over time.

University of North Dakota, Economics Department. Grand Forks, ND. 05/2017 – 05/2019

### **Graduate Research Assistant**

- Worked with professors doing research in the fields of macroeconomics, financial econometrics, and housing prices across the US.
- Tutored undergraduate and MBA's for 2 years in econometrics along with basic economic principles.

## Data Science Projects

- [TimeSeriesCatchAll](#) A time-series package that runs 1000s of models against your series in parallel. It uses Hyndman's [Forecast](#), [Forecasthybrid](#) and [DLM](#) to forecast a time-series. Is in a state where I am happy with it, it is able to go through thousands of models in parallel for a time series and based off the steps forward you want to look it is able to do the back testing and pick the best model forward.

- [World of Warcraft, Black Market Gold](#) The whole point of this project was to look at how patches impacted gold prices in world of warcraft. It evolved into trying to predict when to *buy gold* in the game to try and play the market just like in the stock market. It turns out that gold prices are very unpredictable and follow a stochastic trend.
- [Twitter NLP](#) This was brought about by being interested in seeing if we could predict the stock market based on twitter sentiment. using [sentimentr](#) we are able to determine the sentiment of string of texts. Using this, we can get a time-series of someone's sentiment. Long story short, it did not work out as I wanted it to but, it is pretty cool to see someone's sentiment over time using their twitter data.
- [Deploying plumber in the IBM Cloud](#) This was more of a learning experience with understanding how a full-stack web application works with R. Also, connecting to a DB2 from a container is somewhat annoying if you must use that dbms.
- [Social Distancing Example](#) This shiny app was based on the SIR model to look at how social distancing works in a simple example and also how epidemics work in this classical example.

## Education

University of North Dakota. Grand Forks, ND. 2017 – 2019  
**Masters in Science, Applied Economics** GPA 4.0

University of North Dakota. Grand Forks, ND. 2013 – 2017  
**Bachelors of Arts, Economics & Bachelors of Science, Mathematics**

## Technology and Data Toolbox

**Technology:** Kubernetes, Docker, Openshift, IBM Cloud, R, Python, SQL, Cognos, HTML/CSS/JS, Shiny, Plumber, Django, Keras, and Excel.

**Data Toolbox:** Deep learning, time-series, data mining, visualization, regression, ensembling, machine learning, ETL, Rest API's, cloud deployment, and NLP.