

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 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.

InfoTech, Consulting. Gainesville, FL. 05/2018 – 08/2018

Consulting Internship

- Worked with PhD consultants in the manner of using data to show if collusion in a certain market was happening or now.
- Analyzed millions of rows of data and gathered key insights for our economic litigation team to look into more deeply as to why these anomalies were happening.

Mayo Clinic, Advanced Image Research. Rochester, MN. 05/2015 – 08/2015

Research Fellowship

- Analyzed 3d image scans of livers, hearts, and kidneys. The data was then sent through a series of ordinary differential equations(ODE's) to determine the stiffness of the body parts.
- Researched the effect of passing waves through a plate of varying thicknesses to simulate the wall of the heart to determine if it is possible to measure heart stiffness without going through an invasive process. (See [Lamb Waves](#))

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. It is able to go through 1000s 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 api 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 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, PlumbR, Django, Keras, Tensorflow, and Spark.

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

