

# Brian Reinbold

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## EDUCATION

**University of Illinois at Urbana-Champaign, IL**

*Master of Computer Science*

August 2023

GPA: 4.0/4.0

**Indiana University in Bloomington, IN**

*Mathematics BS and Economics BA*

May 2017

GPA: 3.9/4.0

## WORK EXPERIENCE

**Discover Financial Services** - Chicago, IL

June 2022 – August 2022

*Data Scientist Intern*

- Devised a comprehensive strategy to optimize student aggregate debt limits for the Discover Student Loan product, reducing losses by an estimated \$9MM annually
- Delivered impactful recommendations to senior leaders aimed at enhancing the predictive capabilities of earnings data based on student major

**Instra.Ai** - Chicago, IL

October 2021 – June 2022

*Machine Learning Engineer Intern*

- Constructed an image augmentation pipeline for an early stage start-up in the healthcare sector and integrated data stored in S3 and trained a state-of-the-art object detection model
- Supervised team of 5 to integrate additional object detection models into the training pipeline
- Collaborated with others to improve a program to generate synthetic images to improve model training
- Architected initial SQL database schema for an at home healthcare management application

**Federal Reserve Bank of St. Louis** - St. Louis, MO

June 2020 – August 2021

*Data Engineer*

- Orchestrated data updates, maintenance, and acquisition for [FRED](#), a large database consisting of over 822,000 economic time series from 110 different sources, utilizing Python, SQL, and PHP as primary tools
- Incorporated over 200,000 data series into a metadata pipeline to automatically maintain series metadata, ensuring efficient management and accuracy of series information
- Collaborated within an Agile methodology, actively engaging with the entire team to provide and receive valuable feedback on code and design, ensuring alignment with business requirements and effectively tailoring applications for functionality
- Documented data engineering processes, including data flows, system architectures, and technical specifications, to facilitate knowledge sharing and maintain system documentation
- Created a Python module utilizing OOP to automate the parsing of release dates in 68 releases from 15 different sources

**Federal Reserve Bank of St. Louis** - St. Louis, MO

July 2017 – June 2020

*Research Associate*

- Provided primary research assistance to 3 economists, exceeding the typical responsibility of working with 2 economists
- Utilized advanced statistical procedures, including VARs, logit models, and dynamic fixed effects regressions, to conduct rigorous econometric research for publication in esteemed academic journals
- Recognized as a role model by both management and peers, achieving the highest designation in year-end performance reviews for two out of three years as a research associate
- Prepared economists for high-stakes presentations. Notably, one of these presentations was acknowledged as exceptional by the Bank's president, being recognized as one of the best and most informative FOMC policy briefings
- Recruited and trained an average of 5 new research associates per year, ensuring a seamless onboarding process and equipping them with the necessary skills for their roles
- Co-authored 36+ bank publications, some of which have been cited by [Bloomberg](#), [The Telegraph](#), and the [LA Times](#)
- Engineered a pipeline to update data relevant for a VAR to predict real GDP to advise the Colombian government
- Authored a report in the Bank's Beige Book, utilizing state sales tax data as a proxy for consumption, to offer comprehensive insights into consumer spending trends

## CERTIFICATES

AWS Cloud Practitioner

September 2021

## COURSEWORK

Machine Learning • Deep Learning • NLP • Computer Vision • Probability Theory • Stochastic Processes • Econometrics

## TECHNICAL SKILLS

Python • R • Java • C++ • Pytorch • Tensorflow • SQL • AWS • Git • Bash • PySpark • Docker • Excel • Matlab • LaTeX