Brian Reinbold

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EDUCATION

University of Illinois **August 2023**
Master of Computer Science; GPA: 4.0/4.0 Urbana-Champaign, IL

Indiana University **May 2017**
BS in Mathematics, BA in Economics; GPA: 3.9/4.0 Bloomington, IN

EXPERIENCE

Data Scientist Intern **June 2022 – August 2022**
Discover Financial Services Chicago, IL

- Analyzed data from disparate sources using Python and Excel, and devised a comprehensive strategy to optimize student aggregate debt limits for the Discover Student Loan product, reducing losses by an estimated $9MM annually
- Presented recommendations to senior leaders aimed at enhancing the predictive capabilities of earnings data based on student major, leading to additional project ideas for product enhancement
- Wrote a ten-page report that identified additional data sources that will be beneficial for strategy development

Machine Learning Engineer **October 2021 – June 2022**
Instra.AI Chicago, IL

- Implemented and trained a state-of-the-art object detection model for an early-stage start-up in the healthcare sector
- Constructed an image augmentation pipeline and integrated data stored in Amazon S3, improving model's F1 by 30%
- Oversaw team of five interns that implemented three additional object detection models into the training pipeline
- Contributed improvements to a program to generate synthetic images, significantly increasing images for training
- Gathered requirements and architected initial SQL database schema for a healthcare management application

Data Engineer **June 2020 – August 2021**
Federal Reserve Bank of St. Louis St. Louis, MO

- Maintained data pipelines for 786,000 economic time series from 103 different sources for the FRED database
- Incorporated over 200,000 data series into a pipeline using Python to automatically maintain series metadata, increasing accuracy and consistency of 25% of data and reducing manual workload
- Ingested data using Python and SQL, increasing data acquisition by 6,000 data series across five different sources
- Collaborated cross functionally with engineers, software developers, and product owners within an Agile methodology, to provide and receive valuable feedback on code and design and ensuring alignment with business requirements
- Documented processes, ETL pipelines, system architectures, and technical specifications, to facilitate knowledge sharing and maintain system documentation, receiving praise from other engineers for its usefulness
- Programmed a Python module to automate the parsing of release dates in 68 releases from 15 different sources

Research Analyst **July 2017 – June 2020**
Federal Reserve Bank of St. Louis St. Louis, MO

- Conducted research in monetary policy and international trade, including gathering and processing data, performing statistical analysis, modeling, data visualization, and communicating results to technical and non-technical audiences
- Achieved the highest designation in year-end performance reviews in two of three years
- Recruited and trained an average of five new research associates per year, ensuring a seamless onboarding process
- Created presentations for the Bank's president in preparation for meetings with the FOMC, the nation's monetary policymaking body. He recognized one of these presentation as one of the best and most insightful policy briefings
- Investigated the relation between inflation and unemployment using spectral analysis and published it in the Review
- Designed weighted least squares regressions for paper published in the AER, the economic profession's top journal
- Authored 36+ Bank publications, some of which have been cited by Bloomberg, The Telegraph, and the LA Times
- Engineered a pipeline in R to update relevant data for a VAR to predict real GDP to advise the Colombian government
- Automated data gathering and web scraping using R for the Bank's Beige Book, a publication which informs U.S. monetary policy, saving 32 hours of manual labor annually and providing analysis on consumer spending trends

ADDITIONAL INFORMATION

- **Coursework:** Machine Learning, Deep Learning, NLP, Data Mining, Probability Theory, Stochastic Processes, Cloud Computing Applications, Text Information Systems, Data Curation, Computer Vision, Scientific Visualization
- **Certificates:** AWS Cloud Practitioner (September 2021), MLOps by DeepLearning.AI, Meta Database Engineer
- **Skills:** Python, R, Java, C++, PyTorch, TensorFlow, Sklearn, SQL, AWS, Git, Bash, PySpark, Docker, K8s