Michael Bollig

bollig.mj@gmail.com ∴ (+1) 928 863 1486 ∴ Poulsbo, WA, 98370

Work Experience

Data Scientist, Data Engineering

HeartFlow Inc, Mar 2022 - Jan 2023

- Led design and implementation of an extensible and cost-effective AWS cloud-native data infrastructure built to automatically scale up for delivering near real time analytics that supported the core product and individual business units. This architecture was built using CI/CD tools and principles to allow for automatic building, testing, and releases.
- Led selection and implementation of Tableau visualization platform for seamless delivery of reporting, interactivity/flexibility of reports, and democratization of data within the company
- Hands-on in engineering development, data analysis, experimentation, and deployment
- Worked cross-functionally with department leaders to define and provide data-driven key metrics, forecasting and predictive modeling company-wide

Data Engineer III

HeartFlow Inc, May 2020 - Mar 2022

- Lead role in centralization of data analytics within the company, combining disparate data analytics efforts into a unified Data Engineering team
- Maintained and developed primary business intelligence data platform in Python, R, and SQL
- Built robust, large-scale distributed ETL pipelines with Spark to ingest and transform data from a petabyte-scale data lake
- Implemented modular data modeling and traceable data lineage for all ETL steps allowing for easy development, deployment, and maintenance of data pipeline and data models
- Utilized IaaS tools (CloudFormation/Terraform) to manage and administer cloud architecture

Process Engineer III

HeartFlow Inc, Feb 2016 - May 2020

- Worked interdepartmentally for 16 months on the Operations Data Engineering team, migrating local data architecture to the cloud, building a data catalog, and transitioning to an agile work environment
- Developed and fully automated an accuracy and reproducibility monitoring system that leverages clustering algorithms (DBSCAN/OPTICS) to identify deviations from the norm. This tool used for quality, efficiency, and training, saves hundreds of hours of overhead while simultaneously improving production quality
- Led several randomized clinical trials (RCTs) from inception to release in the domain of process efficiency, validation of tools and technologies, and to provide evidence needed for FDA clearance of the core product.

Michael Bollig

bollig.mj@gmail.com ∴ (+1) 928 863 1486 ∴ Poulsbo, WA, 98370

Senior Case Analyst

HeartFlow Inc, June 2014 - Feb 2016

- Responsible for processing and reviewing model-generated output of coronary artery geometry and function, derived from CT imaging data using HeartFlow-developed deep learning software.
- Maintained the highest internal certification level, which led to taking an active role in training and mentoring junior analysts as well as completing QC inspections
- Performed inspections and verification on image data integrity and models while maintaining high levels of quality and efficiency

Skills

Languages and Environments

- Python (NumPy, Pandas, Scikit, PySpark)
- SQL (MySQL, Redshift, Postgres)
- R
- AWS (primary)
- GCP and Azure (educationally)

Concepts

- Data Modeling
- Data Migration
- Data Visualization
- Data Structures and Algorithms
- System design
- CI/CD
- OOP
- Integrated Testing
- Agile
- Applied Machine Learning
- RCT design and Statistical Analysis

Tools

- AWS Redshift, Aurora, SQL
- AWS Lambda, Glue, Step, and Batch
- AWS DMS, Cloudwatch, Cloudtrail
- Tableau
- Databricks
- Snowflake
- Spark
- Kubernetes

Soft Skills

- Excellent public speaking and presentation
- Collaborative
- Able to translate complex topics to be understood by non-tech savvy audiences
- Enthusiastic
- Highly motivated
- Strong written and interpersonal communication

Education

University of California, Berkeley - Master of Information, Data Science (MIDS)
May 2020 - December 2021

University of Arizona - Bachelor of Science, Biomedical Engineering (BSBME)
September 2010 - May 2014