



TEXAS A&M UNIVERSITY

Statistics

The Statistics Former Student
Network (SFSN) presents

John Schwenck

Quantitative Analyst
Wells Fargo | Consumer AI & ML Model
Development Center



AI & Machine Learning Model Development: From Academia to Industry

Abstract

There exists a large disconnect between the formal mathematical frameworks derived in the academic sphere and the practical considerations of implementing such frameworks "in the wild" in industry. While publishing a paper is typically the finish line for academics, it is the starting point for those in industry looking to productionalize these methods at scale. However, the road from academia to industry is never clear. Oftentimes, real data is sparse, replete with missing data and outliers, and requires ingesting and transforming data across a multitude of sources. When the magnitude of the data reaches millions, billions, or even trillions of observations, traditional frameworks no longer apply. Reproducibility and interpretability are therefore of paramount importance when deploying a model at scale, especially when the risks of non-compliance carry legal and financial ramifications. This presentation will cover an overview of how an idea goes from academic journal to production at scale using examples from the financial services industry to highlight what a typical machine learning / statistics model workflow looks like from start to finish. It will also cover what some of the challenges faced along the way are and how Wells Fargo has addressed them.

Biography

John Schwenck has been a Quantitative Analyst at Wells Fargo in their Consumer AI & ML Model Development Center for the past 3 years. Being in a centralized group, he has had the opportunity to work on projects ranging from marketing offer optimization, branch location modeling, customer lifetime value / net present value forecasting, and currently an internal-NLP based sentiment analyzer. He received his M.S. in Statistics in 2021 from Texas A&M University under Dr. Irina Gaynanova, where he focused his research efforts on biostatistics applications in the realm of wearables tracking and diabetes / hypertension management. He is the creator of the R package, bp, which was a collaborative effort with Johns Hopkins University to develop a suite of tools for analyzing blood pressure data. Prior to his graduate studies at Texas A&M, he worked for a natural gas distribution company, SJI, and helped develop the company's first data science department, whose work spanned the wholesale commodity trading space and pipeline infrastructure development. He received his undergraduate education from the Pennsylvania State University in 2016 with degrees in (B.S.) Economics and (B.S.) Supply Chain Information Systems.

Wednesday, May 1, 2024 | 11:00 AM - 12:00 PM CST

Online webinar only. No meeting room.

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