Ian Schillebeeckx

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EDUCATION

Washington University in St. Louis — St. Louis, MO
PhD, Computer Science (Computer Vision) – Fastest graduation in department history — *2012 – 2016*

Saint Louis University — St. Louis, MO
Honors BS, Computer Science — *2007 – 2011*
Honors BS, Applied Mathematics

EXPERIENCE

VP of Enterprise Data Science and AI — January 2025 – Present
CareDx, Inc. — *San Francisco, CA*

- Built unit volume forecasting capability from scratch ($\sim$75% of revenue), reducing error from 6% to 0.9% across 3/6/12/24-month horizons; deployed Streamlit dashboard for C/VP-level stakeholder access with automated 90-day revalidation; integrated with CFO into quarterly/annual planning
- Established company's first Data Science function outside R&D; became trusted analytical partner to CEO, CFO, and COO for commercial business strategy across Commercial, Operations, and Billing
- Drove 10% revenue increase through end-to-end ML workflow: observational studies, feature engineering, model development, causal inference (Causal DAG/RF), and pre-post controlled analysis
- Directed development of predictive churn system covering $270M revenue (all US transplant clinics); replaced 6-month-lag detection with forward-looking model using novel piecewise linear + dynamic programming approach
- Pitched and secured $1M for RAG-based literature review platform deployed company-wide; directed LLM app producing 12 research manuscripts with 2 journal submissions
- Drove company-wide AI transformation to 92% Copilot adoption ($\sim$750 employees), saving 8% of total hours annually; pioneered Codex data science workflows improving team productivity 50%

VP of Data Science — January 2024 – January 2025
CareDx, Inc. — *San Francisco, CA*

- Led R&D Data Science organization (14 people, $6M budget) spanning Bioinformatics, Statistics, and Data Science teams; reported to CSO with Board of Directors participation
- Directed development of longitudinal time series model using LSTM to predict outcomes from sequential measurements ($\sim$1200 patients, $\sim$5000 time points), outperforming Kalman Filters, HMMs, and cross-sectional models; presented at international conference (top 10%)
- Directed development and validation of two production RNA-seq prediction models (blood-based SVM with RBF kernel, tissue-based LASSO regression) achieving regulatory deployment

Head of Product and Data Science — December 2017 – January 2024
Cofactor Genomics — *San Francisco, CA*

- First author on Nature ML paper (2nd most downloaded in 2022) and 3 AI patents
- Designed, trained, and launched 2 ML model based products in CAP/CLIA regulated environment
- Designed and powered prespecified randomized multi-center study ($\sim$500 subjects, 12+ sites) to validate production ML model using CMH, Fisher Exact, and McNemar tests; achieved regulatory approval enabling commercial revenue
- Optimized AWS Batch pipeline (+200% speed, -25% cost); owned end-to-end production code (AWS/CI/CL)

SELECTED PUBLICATIONS & PATENTS

3 Artificial Intelligence Patents – Methods for immune response prediction, cellular state determination, and data processing using AI/deconvolution
ML-based Biomarker for Immunotherapy Response – *Nature Scientific Reports, 2022 (2nd most downloaded)*
4 Computer Vision Publications – *CVPR, ECCV, ICCP, 3DV (2014-2016)*

TECHNICAL SKILLS

Languages & Tools: Python, R, SQL, MATLAB, Streamlit, AWS (Batch, SageMaker), Databricks, Docker
ML & Statistics: Time Series Forecasting (ARIMA, LSTM, Prophet), Causal Inference (DAGs, Causal Forests), Predictive Modeling, [Un]supervised Learning, Model Monitoring & Explainability, Production ML Systems
Data Science: Feature Engineering, Cross Validation, Bootstrap, Large-Scale Data Analysis, A/B Testing
Leadership: Team Building, Product Roadmapping, OKRs, Cross-Functional Collaboration, Executive Communication