

Ian Schillebeeckx

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EDUCATION

Washington University in St. Louis

PhD, Computer Science (Computer Vision) – Fastest graduation in department history

St. Louis, MO

2012 – 2016

Saint Louis University

Honors BS, Computer Science

St. Louis, MO

Honors BS, Applied Mathematics

2007 – 2011

EXPERIENCE

VP of Enterprise Data Science and AI

CareDx, Inc.

January 2025 – Present

San Francisco, CA

- Established company's first Data Science function outside R&D; became go-to analytical partner to CEO, CFO, and COO for business strategy across Finance, Commercial, Operations, and Billing
- Built unit volume forecasting capability from scratch (~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
- 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; built LLM agent scoring TPPs against rubric to inform 5-year product roadmap; directed LLM app producing 12 research manuscripts
- Drove KPI-driven, company-wide AI transformation to 92% Copilot adoption (~750 employees), saving 8% of total hours annually; pioneered Codex data science workflows improving team productivity 50%

VP of Data Science

CareDx, Inc.

January 2024 – January 2025

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
- Oversaw enterprise BI portfolio of ~20 Tableau dashboards spanning Customer Ops, Sales, Manufacturing, and CLIA Lab; delivered operational and strategic reporting to cross-functional leadership
- Directed development of longitudinal time series model using LSTM to predict outcomes from sequential measurements (~1200 patients, ~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

Cofactor Genomics

December 2017 – January 2024

San Francisco, CA

- Defined multi-year roadmaps and company-wide OKRs; designed and monitored KPIs for ML model and product performance across the organization
- Built kit manufacturing supply chain from scratch: established MSAs with multiple reagent manufacturers, negotiated CMO contract, led tech transfer to CMO, and defined packaging requirements
- 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
- Architected data infrastructure: ML model repository, training data platform (100s GBs), and AWS Batch pipeline (+200% speed, -25% cost)
- Designed and powered prespecified randomized multi-center study (~500 subjects, 12+ sites) to validate production ML model using CMH, Fisher Exact, and McNemar tests; achieved regulatory approval enabling commercial revenue

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

BI & Analytics Platforms: Databricks, Tableau, Streamlit, AWS (Batch, SageMaker), Docker

Data Architecture: ML Model Repositories, Training Data Platforms, Scalable Cloud Pipelines, SQL

ML & Statistics: Time Series Forecasting (ARIMA, LSTM, Prophet), Causal Inference (DAGs, Causal Forests), Predictive Modeling, [Un]supervised Learning, Model Monitoring & Explainability

GenAI: RAG Applications, LLM Deployment, Copilot/Codex Integration, Enterprise AI Transformation

Languages: Python, R, SQL, MATLAB

Leadership: Team Building, OKRs, KPI Design, Product Roadmapping, Cross-Functional Collaboration, Executive Communication