Contact

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www.linkedin.com/in/ian-schillebeeckx (LinkedIn)

Top Skills

Mentoring

Team Management

Design Control

Languages

French

Certifications

Technical Product Management

Publications

Strategies for De Novo Assembly of Genomes and Transcriptomes Using Combined Illumina and Roche 454 Sequencing Data

Structure from Shadow Motion

Analytical Performance of an Immunoprofiling Assay Based on RNA Models

Automated condition-invariable neurite segmentation and synapse classification using textural analysis-based machine-learning algorithms

Structured Light Field Design for Correspondence Free Rotation Estimation

Ian Schillebeeckx

VP of Data Science at CareDX with expertise in Delivering Business Value through Data Science, Causal Statistics, and Machine Learning

San Francisco, California, United States

Summary

With over 10 years of experience in healthcare entrepreneurship, research and development, and product management, I am a passionate and innovative leader who currently drives the vision and execution of RNA-based diagnostics and biomarkers for immuno-oncology assays at Cofactor Genomics. I hold a PhD in Computer Science with a focus on machine learning, and I have a strong experience with molecular biology, bioinformatics, and NGS analysis.

Experience

CareDx, Inc.

2 years 2 months

Vice President of Enterprise Data Science and AI

January 2025 - Present (1 year 2 months)

San Francisco Bay Area

Established and led cross-functional Data Science team driving business impact across Commercial, Operations, Billing, and enterprise AI adoption.

Key Achievements:

- Revenue Optimization: Led initiative increasing payment rates by ~10% through predictive modeling, causal inference (DAGs, causal random forests), and data-driven business rules
- Strategic Product Planning: Developed AI agent scoring product opportunities on market potential and technical feasibility, directly informing company's 5-year product roadmap
- Forecasting Excellence: Transformed core business forecasting from 6% to 0.9% average absolute error through custom optimization (business line representing ~90% of revenue), delivering weekly C-suite reports and executive dashboards
- AI Transformation: Reversed company AI policy from restrictive to 92% monthly active usage through grassroots education, executive alignment,

and company-wide training—estimated to save 8% of total company hours annually
- Research Acceleration: Deployed internal RAG-based knowledge discovery platform and AI-powered content generation tool, producing 12 research manuscripts with 2 journal submissions
- Commercial Analytics: Conducted causal observational studies identifying key business drivers using modern causal inference methods

Vice President of Data Science
January 2024 - January 2025 (1 year 1 month)
San Francisco Bay Area

Led R&D Data Science organization spanning Bioinformatics, Statistics, and Data Science teams, reporting to Chief Scientific Officer.

Key Achievements:
- Restructured team operations to dedicate 15% capacity toward Data Science-led clinical investigations
- Pioneered two company firsts: the first longitudinal model for rejection prediction using cfDNA, and the first evidence demonstrating test impact on therapeutic decision-making
- Expanded Data Science influence beyond R&D into cross-functional operations
- Directed development and validation of two RNA-seq based transplant rejection prediction models

Cofactor Genomics
6 years 2 months

Vice President of Product
February 2022 - January 2024 (2 years)
San Francisco, California, United States

Primary decision-maker of all product, machine learning, biomarker, and diagnostic considerations of 3 LDT and IVD RNA-seq immuno-oncology diagnostic tests in a CAP/CLIA/GMP regulated environment.

Product Management:
- Defined 3/1 year roadmaps and company wide OKRs every quarter
- Designed and monitored KPIs for machine learning and product performances
- Established value proposition by interviewing 30+ end users and key opinion leaders

- Wrote requirements and user story for web portal and launched in 4 weeks with 1 SWE
- Monitored competitors and created our regulatory strategies from their precedent
- Represented company at conferences and presented as products figure head

Machine Learning Management:
- learning from 1000s x 100s tables to predict response to 5 cancers
- 1st author on ML based biomarker Nature paper (2nd most downloaded in 2022)
- authored 3 Artificial Intelligence based patents and managed IP portfolio
- architected ML model repository and training data (100s GBs) database
- architected AWS Batch pipeline, resulting in +200% speed and -25% cost

Diagnostic Management:
- Design companion diagnostic development and validation roadmaps
- Directly managed biomarker team and coordinated external lawyers, reagent vendors, manufacturers, and statistical/regulatory consultants
- Managed kit box manufacture and Contract Manufacturing Organization to fulfill GMP-compliant IVD kit
- Created Master Service Agreements with 6 different reagent vendors
- Worked on design control system and FDA breakthrough device designation application
- 1st author on CAP analytical validation paper
- Led biomarker discovery and validation in HNSCC, NSCLC, Bladder, Kidney, Melanoma Cancers
- Established value proposition of LDT by interviewing 30+ physicians and key opinion leaders
- Designed Palmetto MolDX validation strategy with limited precedent
- Designed primary endpoints of 3, IRB-approved, pre-specified clinical validation studies

Director of Product Engineering
August 2020 - March 2022 (1 year 8 months)

I develop and manage RNA based products at Cofactor Genomics, including ImmunoPrism, an immunoprofiling and biomarker discovery assay for immuno-oncology and oncology researchers. This assay considers low inputs of tumor from FFPE samples and reports on the quantitative presence of immune cell

types, such as CD8+ Tcell and M1 and M2 macrophages. ImmunoPrism is available as a CAP accredited service or in kit form.

I'm currently learning/interested in T cell exhaustion (CD4 and CD8), T cell dysfunction, and T cell activation states.

Senior Product Development Manager
December 2017 - August 2020 (2 years 9 months)
San Francisco Bay Area

Where4Care
Chief Executive Officer
May 2017 - August 2020 (3 years 4 months)
Greater St. Louis Area

Where4Care is a text message service that asks user about their symptoms and tells them where to go to seek care. Where4Care saves patients time and saves payers money by pointing non-emergent cases away from ERs and towards lower cost health care settings.

Sling Health
3 years

Entrepreneur in Residence
September 2016 - May 2017 (9 months)
Greater St. Louis Area

I solve medical problems by creating companies to commercialize medical technology solutions.

Chief Executive Officer & President, St. Louis Chapter
January 2016 - January 2017 (1 year 1 month)
Greater St. Louis Area

- Lead organization that enables 130+ students to solve clinical problems and learn entrepreneurship
- Lead financing and strategy across Washington University and Saint Louis University and across 5 departments
- Strategic focus on institutionalizing core activities with written internal protocols and resources
- Reorganized leadership structure to focus on core activities and scaling due to large growth in customer base

Vice President & External Affairs
June 2014 - January 2016 (1 year 8 months)

- Planned and financed FY16 Budget
- Established accounting system that tracks expenditures and tracks reimbursements for 40+ people
- Lead the formalization of IDEA Labs curriculum and implemented on "wiki" online resource
- Lead publicity and promotional initiatives through social media, news sources, and public events
- be the ear and voice of IDEA Labs on official channels
- develop and cultivate relationships with university, community, and corporate stake holders

Washington University in St. Louis
Graduate Research Assistant
January 2013 - August 2016 (3 years 8 months)
Greater St. Louis Area

- Department of Computer Science & Engineering
- Pless Lab
- Research Topics: Synthetic Light Fields, Camera Calibration, Pose Estimation, Computational Photography, Long Term Time Lapse Imagery
- Publications:
+ Structure from Shadow Motion, ICCP 2014
+ Structured Light Field Design for Correspondence Free Rotation Estimation, ICCP 2015
+ The Geometry of Colorful, Lenticular Fiducial Markers, 3DV 2015
+ Single Image Camera Calibration with Lenticular Arrays for Augmented Reality. CVPR 2016
+ Pose Hashing with Microlens Arrays. ECCV 2016

The Mint Group
Founder
December 2013 - December 2014 (1 year 1 month)

The Mint Group is taking a fresh approach to nasal endoscopy and is well poised to change the existing paradigm of ENT care. ENT physicians and administrators are frustrated with a lack of ergonomics in current designs, and excessive initial and maintenance costs. Our solution is a medical imaging system comprised of an endoscope with disposable optics and wireless attachments that conforms to commodity standards. Our system will reduce the number of endoscopes and personnel a clinic must employ, as well as reduce its operating costs by 66% and their initial investment by 90%. Our

endoscope system will drastically improve ENT patient care at a significantly reduced administrative cost.

2014 Arch Grants Finalist
2014 IDEA Labs team

Cofactor Genomics
Computational Scientist
July 2011 - July 2012 (1 year 1 month)

- Characterized the consolidation of Illumina and 454 next-gen sequencing platforms and the effects of read characteristics, library types, and assemblers in DNA/RNA de novo assembly (AGBT, below)
- Established production pipelines based on research and development
- Translated R&D into marketing opportunities and industry presence through social media
- Designed custom analysis procedures through next-gen sequencing technologies and methodologies
- Delivered analysis through variant calling, expression analysis, and de novo assembly.
- Designed and implemented memory, cpu, and I/O efficient analysis tools (C/C++/Perl)

Independent Contractor
Consultant
May 2011 - March 2012 (11 months)

- Deducing truths about quality, quantity, efficiency, reproducibility, etc related to different processes using elementary probability and statistics.
- Supporting sales in translating these truths into terms the customer can understand.
- Implementing QC and Sampling procedures to ensure statistical significance and industry standards
- For key probabilistic and statistical methods, implementing prototype software
- Client: Dynalabs

N/A
Independent Projects
January 2011 - January 2012 (1 year 1 month)

- Unreleased alpha of a Speech Generation/Augmentative and Alternative Communication Device (Android 3.0)

- Release of StartAid, a competitive sailing application for Android to aid in start accuracy (https://market.android.com/details?id=com.ians.startAid)
- Developing Smoozy, a cheap, accessible, open-source solution to precision orientation built on the Arduino platform

Saint Louis University
Senior Design Project
August 2010 - December 2010 (5 months)

- Advisor: Michael Goldwasser, Ph.D
- Independently wrote a fully customizable Artificial Neural Network package with Backpropagation (C++)
- Used package to optimize a set of learning parameters to predict company share price.

Washington University School of Medicine
Research Technician
August 2009 - December 2010 (1 year 5 months)

- Klyachko Laboratory
- Developed a novel environment for neuronal cell cultures using supported lipid bilayers
- Managed an undergraduates' protein synthesis project.
- Elucidated the dynamics of short term synaptic plasticity in Fragile X rats using a proprietary mechanistic model (MATLAB)
- J. Neuroscience Methods publication (below): Automated condition-invariable neurite segmentation and synapse classification using textural analysis-based machine-learning algorithms.

CERN
Summer Student
May 2009 - August 2009 (4 months)

- Advisor: Veronique Lefebure
- Information Technology Department of Fabric Infrastructure and Organization: Fabric Developments
- Wrote a script to parse thousands of Quattor .xml profiles to identify and list redundant RPM packages. (Perl)

Saint Louis University - Madrid
Advanced Independent Research
January 2009 - May 2009 (5 months)

- Advisor: Fairouz Medjahed, Ph.D

- Independently wrote a preliminary parallel data mining package which combined First Order Machine Learning and Active Objects. (Java)

Washington University School of Medicine - Center for Genome Sciences and Systems Biology

Research Assistant

August 2008 - December 2008 (5 months)

- Michael Brent's Computation Genomics Laboratory
- Mentor: Charles Comstock
- Implemented and refactored genetic statistical analysis scripts (bioPerl and Ruby)

Donald Danforth Plant Science Center

Research Assistant

May 2008 - August 2008 (4 months)

- Mentor: Dr. Brad Barbazuk
- Developed a training set of annotated gene models for Zea Mayz to optimize the Twinscan gene predictor (Perl)

Education

Washington University in St. Louis

Doctor of Philosophy (PhD), Computer Science · (2012 - 2016)

Saint Louis University

Honors Bachelor of Science, Computer Science and Applied Mathematics · (2007 - 2011)