Maximilian Lombardo

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Experience

Biohub (Chan Zuckerberg Initiative) — New York, NY / Remote
Technical Product Lead - AI Research and Cell Science — *Nov 2020 – Present*

- Defined product vision and technical schemas for **CELLxGENE (10K+ users)**, translating scientific requirements into specs. Partnered with engineering, design, ML/AI, and UX teams to deliver the visualization, data discovery, and API tools for AI models, embeddings, and data access, validating features via prototyping and UX research.
- Orchestrated release of **9 biological foundation models**, bridging AI Research and Engineering to productize inference. For VariantFormer, engineered the technical GTM suite (interactive model playgrounds and Remotion videos) **driving 2.6x increase in engagement rate** (48% vs 18%).
- Led 0-1 build of an automated annotation engine, delivering the model (VAE/Logistic Regression) and UI. Reduced curation time by **99.9%** (6 weeks to <1 min) with high accuracy **(F_1: 0.9)**.
- Spearheaded evangelism strategy, developing briefings for the **Frontier Model Forum**. Co-organized scverse (with **NVIDIA, TileDB**) and represented CZI at NeurIPS, establishing leadership in the AI x Bio research community.

Kallyope — New York, NY / Remote
Computational Scientist - ML/AI — *Sep 2017 – Nov 2020*

- Led computational analysis generating a single-cell atlas of a novel tissue, partnering with wet-lab scientists to characterize cell types via graph-based clustering. Delivered insights securing a **$2M milestone** with Novo Nordisk.
- Engineered multi-omics ML pipelines that supported the company's growth from **Series A (pre-clinical)** to **Series D**, contributing to the identification of lead compounds for the **first human clinical trials**.
- Co-developed probabilistic ML models to map neuronal connections, integrating viral tracing with single-cell sequencing data to decode circuit architecture.
- Presented research progress to the Scientific Advisory Board (including **three Nobel Laureates**), synthesizing complex computational results into strategic updates.

IBM Corporation — Amsterdam, NL
Graduate Machine Learning Research Intern - Center For Advanced Studies — *Oct 2016 – Aug 2017*

- Implemented and benchmarked machine learning frameworks to identify disease-causing features from multi-omics data.
- Evaluated dimensionality reduction techniques (subspace projections) for visualizing single-cell patient data.

Columbia University Medical Center — New York, NY
Senior Technician - Experimental Therapeutics for Lymphoma — *Jul 2013 – Aug 2015*

- Uncovered drug resistance via RNA-seq, resulting in **four co-authored publications** (Blood, Clinical Cancer Research).

Education

University of Amsterdam — Amsterdam, NL
Master of Science in Computational Science — *Class of 2018*

Columbia University in the City of New York — New York, NY
Master of Arts in Biotechnology — *Class of 2014*

Siena College — Albany, NY
Bachelor of Science in Biology, Cum Laude — *Class of 2012*

Skills

Languages & AI: Python, PyTorch, SQL, JavaScript, React, RAG, AI Agents, Model Evals, LLMs

Product & Tools: Product Strategy, GTM, Claude Code, AWS, Figma, Marimo, Remotion, Git, User Research

Venture Projects

Stealth Biotech Venture Concept (Founder): Defined product vision for an AI-native "Operating System for Biology," leveraging biological foundation models. Recruited early collaborators and pitched the comprehensive SaaS roadmap to venture capital firms.

Bay Bridge Bio Venture Exploration Project: Developed venture concept and MVP for a single-cell analysis SaaS product for the regenerative medicine space, solicited KOL feedback, and pitched to investors from Andreessen Horowitz, Leaps by Bayer, and J&J Innovation.