Thomas Pellet

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EDUCATION

Northwestern University — **Evanston, IL**
- Ph.D. in Economics — 2019-2023

HEC Paris — **Jouy-en-Josas, France**
- Master in Management — 2015-2018

Sorbonne University — **Paris, France**
- B.Sc. in Mathematics — 2012-2015

PROFESSIONAL EXPERIENCE

Cubist Systematic Strategies — **New York City, NY**
- *Data Scientist,* — 2025-
  - Built the Cubist Factor Engine from the ground up to centralize and standardize factor publication and analytics across the firm, enabling consistent access, backtesting, and validation for 1,000+ factors long-term.
  - Onboarded and validated 12+ datasets spanning financial products and alternative data sources, conducting statistical quality checks, schema validation, and signal suitability assessments for trading. Designed and implemented a data pulse framework using SQL and DuckDB for automated anomaly detection in the process.
  - Conducted alternative data research for signal generation, collaborating with PMs to evaluate factor performance, feature engineering approaches, and predictive robustness.
  - Served as first-line data support for the data pipeline, coordinating with portfolio managers and engineering teams to troubleshoot ingestion, latency, and quality issues in production systems.

Bloomberg L.P. — **New York City, NY**
- *Data Scientist, Data Technologies Engineering Group* — 2023-2025
  - Led $50M product launch data quality initiative, driving end-to-end collaboration across engineering and product teams. Implemented sampling experiments, root cause analysis, and machine learning-based error detection models to optimize accuracy, precision, and recall.
  - Developed distributed backtesting for large-scale data validation, using Argo-orchestrated Kubernetes and GraphQL for query, validating billions of financial records across 20 products to ensure product integrity and data consistency.
  - Designed, tested and deployed scalable infrastructure and microservices to streamline data access, visualization, and ETL pipelines for Human-In-The-Loop learning, reducing QC sampling generation time by 99%.
  - Championed quality-driven transformation across two engineering teams by delivering impactful reporting, leading to prioritized investments in data schema, data access, observability to unlock data featurization and ML training.
  - Supervised 3 data analysts, introducing developer best practices (environment management, unit/integration testing) and scientific management of data assets to improve productivity and reliability.

Northwestern University — **Evanston, IL**
- *Computational Economics Researcher, Economics Department* — 2019-2023
  - Trained and evaluated machine learning models on HPC cluster using distributed computing tools (Dask) and resource schedulers (SLURM) to generate significant financial prediction accuracy gains, resulting in one academic publication.
  - Presented innovative research on the macroeconomic impact of supply chain disruptions using graph theory, leading to a publication in the Journal of Monetary Economics.

Peterson Institute for International Economics — **Washington, DC**
- *Research Analyst for Pr. Olivier Blanchard* — 2017-2018
  - Solved numerically a reinforcement learning model characterizing optimal portfolio allocation, which became the core modeling result for the 2019 American Economic Association Presidential Address.

SKILLS & ACHIEVEMENTS

- **Tech Stack:** Python: Pandas, NumPy, SciPy, PyTorch, Scikit-learn, Pydantic, Spark | R Programming
- **MLOps:** Airflow, Spark, SQL, Redis, Argo, Amazon S3, GraphQL
- **DevOps**: Git, Docker, Jenkins, SLURM, Sphinx
- **Certificates & Achievements:** University of Chicago Exchange Student Scholarship, Northwestern Ph.D. Scholarship