Lucas Durand (he/him/his) | Data & Technology Leader

🌱 *Growing communities of people 👫 building modern data science technology 🛸*

> 💡 **Lucas' pronouns …**
>
> are best used in sentences like: **he** is incredibly talented. **His** experience and skillset will be a great complement to our team; we should hire **him**.

Contact

I'm generally interested in contributing to innovative organizations through partnership, collaboration, and teaching. Reach me by the digital channel of your choosing:

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TD Securities (2016–Present)

Technology Leader | Data Platform & Analytics | Data Strategy | Data Science Evangelism

Progressive technical and leadership roles driving innovation in data platforms, analytics, and cloud migration with a top global investment bank. Combines deep technical expertise with strategic vision to deliver scalable solutions for the business. Recognized with top-tier awards for transformational contributions.

Director, Data Platform & Analytics *(2023–Present)*

I lead and oversee four critical teams that drive data excellence across the organization. My responsibilities include strategic alignment, cross-team collaboration, and ensuring high-quality deliverables while fostering innovation and governance best practices:

1. **Market Data Masters**
   - Focuses on acquiring, managing, and optimizing **financial market data** (e.g., pricing, reference rates, trading volumes).
   - Ensures data accuracy, latency efficiency, and integration with downstream systems.
   - Works closely with traders, quants, and analytics teams to support real-time decision-making.
2. **Reference Data Masters**
   - Manages **static and semi-static reference data** (e.g., securities master, counterparties, corporate actions).
   - Maintains golden sources of truth for critical business operations (risk reporting, compliance).
   - Collaborates with front/middle office to streamline workflows impacted by reference data changes.
3. **Data Quality & Governance**
   - Establishes frameworks/metrics for **data integrity**, lineage tracking, and compliance.
   - Implements proactive monitoring/remediation pipelines to reduce "data fires."
   - Partners with Legal & Risk teams to enforce policies while enabling agile use cases.

4. **Data Science Engineering**
   - Provides scalable infrastructure/platforms (**Jupyter Notebooks**, ML pipelines) for broad quantitative analytics, reporting, AI, and upskilling.
   - Bridges gaps between research prototypes (Python/R) and production-grade deployments.
   - Supports AI/ML initiatives with clean datasets while ensuring reproducibility/monitoring.

Strategic Leadership:

- Define and execute platform roadmap aligned with C-suite objectives; secure buy-in from business stakeholders (trading, risk, finance).
- Lead cross-functional teams (engineering, architecture, governance) to modernize the dealer-wide Data Platform, focusing on cloud migration (Azure/GCP), data fabric/mesh adoption, and next-gen architecture.
- Develop and implement data governance and data quality technology strategy to provide near-realtime visibility into key *data products*.
- Transform market + reference data masters platforms for more reliable, trusted *golden source* data, that vastly reduces manual efforts for workflows like client onboarding and data remediation.

Vice President, Data Science Engineering *(2020–2023)*

Team & Stakeholder Management:

- Built and led a high-performing engineering team supporting Python infrastructure, notebooks-as-code, and analytics tooling.
- Acted as primary liaison between quant teams, IT security, and business units to align priorities and deliver.
- Deliver business-enabling notebooks, applications, and processes 10-25x faster than through traditional technology processes.
- Grow userbase organically to 1000+ users across technology, business, operations, and support teams.

Technical Innovation:

- Scaled JupyterHub deployments via Dask-on-YARN and Spark-on-YARN integrations.
- Architected enterprise-grade identity provider integration for JupyterHub, implementing OAuth 2.0, reducing auth-related development time while improving security posture "out of the box" to users.
- Pioneered "EUC Governance" framework to streamline self-service analytics while mitigating operational risk.

Software Engineer Technical Lead *(2019–2020)*

Technical Innovation & Platform Leadership

- Led development of core Python libraries to provide a common interface for common data operations agnostic to the data sources (SQL, Spark, REST API) to kickstart development workflows, particularly for citizen developers
- Designed scheduling platform for recurring jobs with, becoming critical infrastructure for prototyping and EUC processes
- Created self-service deployment system for analytical applications that empowered business teams across front, middle, and back office to productionize dashboards without engineering support

Project Leadership:

- Architected TDSs first centralized JupyterHub+ platform (serving 400+ users), reducing prototyping time by 70%.

- Mentored junior engineers through code reviews and best-practice workshops (adopted org-wide).

Awards:
- **TDS Pinnacle Award of Achievement** (Top 0.1% performance).
- **TD Vision In Action Award** (1-in-1000 enterprise-wide recognition).

Earlier Roles

Software Engineer *(2018–2019)*: Bugfixes, enhacements, and early architecture for the TDS Notebooks Platform; spoke at PyCon CA ([talk link](#)).

Quantitative Developer Associate *(2016–2018)*: Implemented derivatives pricing models; founded "Knowledge Academy" learning series ([GitHub](#)).

National Bank Financial Markets (2014-2015)

Trade Floor Application Analyst (Institutional Equities)

Supported quantitative analysts and traders on the institutional equities desk through development of analytics tools and Direct Market Access (DMA) reporting solutions:

• Built Python data pipelines (Pandas, SQLAlchemy) processing live trade executions and market data feeds

• Designed interactive dashboards (AngularJS, d3.js, Bokeh) visualizing trading performance metrics

• Implemented web scrapers (Beautiful Soup) for competitor pricing intelligence

• Collaborated directly with traders to refine Tableau visualizations of order flow patterns

Key Exposure: Electronic trading systems | Low-latency market data | Quantitative workflow automation

York University

MSc., Theoretical Physics

[Major Research Project](#): inSIDious Matter

Throughout my graduate education I participated in a battery of challenging theoretical coursework, while balancing teaching responsibilities as well as the development of my original research. The focus of my major research project pertained to the frontier of new physics and required a broad knowledge of concepts from mathematical frameworks, to physical observations and numerical analysis, through in-depth coding in a handful of languages.

Spending a significant amount of my time conducting independent research has had a huge impact on my development, forcing me to hone a wide variety of skills and solidify a strong work ethic.

Perimeter Institute

Visiting Researcher

Visiting the Perimeter Institute for Theoretical Physics (PI), I was able to collaborate and engage with a collection of the top minds in theoretical physics today. My time was spent pursuing my research as well as in sharing ideas and participating in the wealth of seminars, lectures, and tutorials both through the Perimeter Scholars International programme and the PI as a whole.

University of Toronto

HBSc Joint Specialist, Physics & Philosophy

My education focused around the intersections between Physics & Philosophy. I developed a deep understanding of the manner in which strict formalism in science blossoms in the presence of an open and self-critical perspective. By continuously questioning one's own methods and practices

and investigating their connections with the big picture, one can greatly increase their own effectiveness.