Quentin-Gabriel Thurier

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Profiles:
129 Hobsonville road, West Harbour, Auckland, New Zealand
France & New Zealand citizen

Experience

- **Decoded Health** — Auckland, New Zealand
  Senior ML Engineer — *June 2023 – Present*
  - **Develop and maintain Decoded Health's AI medical resident for urgent care clinics**.
  - Research, implement and deploy prompt engineering strategies to summarise patients' conversations using pre-trained large language models, allowing a fully automated medical intake process.
  - Establish standards for data versioning and ML-based services observability building upon doctors' feedback.
  - Take part in the on-call schedule and manage production incidents.

- **Xero - Science, Evaluation and Measurement team** — Auckland, New Zealand
  Senior Applied Scientist - ML Products — *November 2020 – May 2023*
  - **Worked in the cross-functional team owning Xero's ML-powered bank reconciliation service**.
  - Researched, implemented and deployed deep learning models to support Xero's flagship product, which has proven to reduce time spent on manual data entry by bookkeepers.
  - Collaborated with the product team regarding models' online evaluation and errors analyses.
  - Co-led research on learning to rank and named entity recognition deep learning architectures for bank statements.
  - Drove the refactoring of a legacy data pipeline to improve model experimentation.
  - Liaised with the intellectual property team to fill three patents.
  - Supervised four direct reports (graduate and junior applied scientists).

- **PredictHQ - Data Intelligence team** — Auckland, New Zealand
  NLP Engineer — *May 2019 – November 2020*
  - **Developed PredictHQ API's ML-based features together with data and software engineers**.
  - Researched, implemented and supported the deployment of an ML classifier for event entity resolution, halving the records duplication rate and giving PredictHQ a competitive edge in the events data providers space.
  - Researched, implemented and supported the shadow deployment of an ontology-based ML multi-label classifier for event entity categorisation, enhancing feature engineering capabilities for downstream ML tasks.
  - Led a team towards delivering an ML regression model prototype for concert events ranking, which resulted in the launch of a new service to handle feature precomputation.
  - Mentored data analysts and introduced data scientists to Python and natural language processing.

- **Orion Health - Research team** — Auckland, New Zealand
  Data Scientist — *February 2017 – April 2019*
  - **Shaped Orion Health's ML-based product features with clinicians and software engineers**.
  - As the principal investigator for a research program on AI interpretability in healthcare, successfully applied for funding, formed and led a team of software engineers, data scientists, legal experts and clinicians towards the delivery of multiple prototypes and two peer-reviewed publications (JAMIA & IEEE).
  - Led the R&D and supported the staging deployment of an ML health risk calculator into North Shore Hospital.
  - Delivered multiple deep learning model prototypes for clinical natural language processing (e.g. concept extraction, de-identification, dosage instruction parsing), paving the way for current Orion Health products' ML capabilities.
  - Built a GPU workstation with the IT department to enable the team to do deep learning research.
  - Presented and shared my work at multiple venues, including the Ministry of Health.
  - Supervised multiple interns and mentored junior data scientists.

- **Qrious** — Auckland, New Zealand
  Data Scientist — *September 2015 - January 2017*
  - **Delivered insights using mobile phone activity traces and public Wi-Fi network data**.
  - Conducted bespoke geospatial studies (e.g. event attendance, domestic tourist provenance, modes of transport usage, travel time, road traffic volume) for councils, tourism and transport organisations, helping Spark New Zealand to identify strategies to monetise its data assets.
  - Led the research on population flow clustering, mode of transport detection, and work/home location inference.

- **NetBooster - Data and Analytics team** Paris, France
  Data Manager *July 2014 – August 2015*
  - **Implemented data-driven marketing solutions using web server logs**.
  - Initiated many proof of concepts (e.g. next page visited prediction, users' online journeys clustering, multi-channel marketing campaigns optimization, conversation rate estimation over time) for a leader of the automotive industry, allowing NetBooster to start its data science offerings.
  - Implemented, deployed and maintained customers' cloud web analytics dashboards.
- **Société Générale Corporate and Investment Banking - Anti-Fraud team** Paris, France
  Statistician *October 2010 – October 2013*
  - **Worked in the cross-functional team in charge of unauthorized trading prevention**.
  - Contributed to the implementation and roll-out of a network analysis software aiming at strengthening Société Générale's unauthorized trading prevention system in response to a significant financial loss ("affaire Kerviel").
  - Initiated a statistical methodology to reveal suspicious trading activity requiring further investigation by auditors.
  - Facilitated R programming language tutorials at the National School for Statistics and Information Analysis.
- **Société Générale Corporate and Investment Banking - Anti-Fraud team** Paris, France
  Intern - Master's thesis focused on statistical methods for preventing unauthorized trading *April 2010 – Sept. 2010*
- **Colorado State University - Statistics Department** Fort Collins, USA
  Intern - Conducted time series analyses of carbon emissions *June – July 2009*

Education

- **Telecom ParisTech** Paris, France
  Post Master's degree in ML and Big Data ("Mastère spécialisé") *October 2013 – June 2014*
- **University of Washington** Seatle, USA
  Certificate in Data Science (distance learning) *January – June 2013*
- **ENSAI, National School for Statistics and Information Analysis** Rennes, France
  Master of Science in Statistics equivalent ("Diplôme d'ingénieur") *2005 – 2010*

Skills

Science: Machine Learning, Deep Learning, Natural Language Processing, Statistics, Linear Algebra, Probability
ML Engineering: TensorFlow, scikit-learn, spaCy, Git, Github, Prodigy, Argilla, DVC, Prefect, Docker, GitLab
Data Engineering: Snowflake, Redis, ArangoDB, Elasticsearch, Hadoop (*certified*), Hive, Spark (*certified*), Redshift
Visualisation: Dash, Shiny, Tableau, Snowsight, MicroStrategy, Superset
Programming Languages: Python, Bash, SQL, R, SAS (*certified*), Java
Cloud Platforms: Amazon Web Services, Google Cloud Platform (*certified*)

Patents

Method, Program, and Apparatus for Processing Sensitive Data	May 2023
Methods and Systems for Training Attribute Prediction Models	March 2023
Transaction Data Processing Systems and Methods	June 2022

Research

Physician understanding, explainability, and trust in a hypothetical ML risk calculator	JAMIA 2019
Smart MedRec: Using ML for reading dose instructions and incorporating this in clinical software	HINZ 2019
Inspecting a ML-based clinical risk calculator: a practical perspective	IEEE CBMS 2019
Interpretable ML for healthcare	HINZ 2018
Improving clinical named entity recognition with transfer learning	HIC 2018
HOPE (Health Outcomes Prediction Engine) for stroke	HINZ 2017
New Zealand health data review	HINZ 2017

Interests

Judo (second degree black belt, New Zealand nationals medalist, coach & former club secretary), Surfing, French Cinema