DUNCAN CAMERON-STEINKE

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AI researcher and recent MSc graduate in Mathematics and Statistics, specializing in uncertainty quantification for deep learning and deep-learning-enhanced stochastic forecasting with hidden Markov models, with applications to financial markets.
Three years in data and analytics, most recently as a senior data engineer at ServiceTitan, and two years as co-founder and CTO of an analytics startup.

EXPERIENCE

ASSOCIATE RESEARCHER
Sep 2026 – Present 2 mos

The University of British Columbia · Kelowna, BC

- Conducting research in statistics and artificial intelligence, with a focus on uncertainty quantification.
- Developing Belief Distribution Learning (Paper in preparation) with Dr. John Thompson, a novel deep learning framework with learned predictive uncertainty.
- My research poster presented at the Canadian Statistical Society conference is available at https://duncancs.ca/bdl

SENIOR DATA ENGINEER
Aug 2022 – Apr 2024 1 yr 9 mos

ServiceTitan

- Built and owned the data platform on Snowflake and Tableau, managing one engineer.
- Embedded with internal teams to turn open business problems into shipped analytics.
- Architected the data model and owned the pipelines behind a client-facing analytics product (Snowflake, SQL, Python) serving 1,800+ customers.
- Designed an A/B testing dashboard, including sample sizing and significance testing, to measure the impact of new product features.

ANALYTICS ENGINEER
Jul 2021 – Aug 2022 1 yr 2 mos

HomeX / Schedule Engine (acquired by ServiceTitan)

- Established the company's single source of truth for reporting by building a net new analytics platform end to end, from data ingestion, cleansing, and augmentation through to analysis and reporting dashboards.

CO-FOUNDER & CTO
Jun 2019 – Jul 2021 2 yrs 2 mos

Backr.ai (YouTube analytics startup)

- Co-founded a YouTube analytics startup and grew it to 50 customers, including channels with 3M+ subscribers.
- Developed a custom NLP model to classify YouTube comments and analyze sentiment, helping creators grow engagement on their channels.
- Hired and led a team of three full-time developers and a data analyst, owning product roadmap and technical strategy from inception.

Won first prize ($30K) at the DDQIC pitch competition · NextAI Montreal AI accelerator (HEC Montréal, Mila)

MACHINE LEARNING RESEARCH INTERN
Jan 2019 – Apr 2019 4 mos

Institute for Infocomm Research · Singapore

- Improved short-text classification by creating extended documents from transformer embeddings.
- Authored an NLP research paper (arXiv pre-print) available at https://arxiv.org/abs/1909.07512.

Singapore International Pre-Graduate Award

EDUCATION

THE UNIVERSITY OF BRITISH COLUMBIA
Sep 2024 – Aug 2026

Master of Science (MSc) · Kelowna, BC

Mathematics and Statistics

GPA: 4.33/4.33

- Coursework in nonparametric models, stochastic processes, differential equations, generalized linear models, and optimization.

QUEEN'S UNIVERSITY
Sep 2015 – May 2020

Bachelor of Applied Science (BASc) · Kingston, ON

Engineering Physics

GPA: 3.9/4.0

- Core studies in physics, mathematics, statistics, and computer programming.

Dean's Scholar · H. Jansen Memorial Scholarship (highest standing in Physics I & II)

CERTIFICATIONS

MIT SCHWARZMAN COLLEGE OF COMPUTING
2022

Professional Certificate · Remote

Data Science and Machine Learning: Making Data-Driven Decisions

RESEARCH PROJECTS

BELIEF DISTRIBUTION LEARNING
Mar 2026 – Present

Research paper (in preparation)

- Created a novel deep learning algorithm grounded in belief theory by combining Subjective Logic with Evidential Deep Learning.
- Evaluated against published Label Distribution Learning algorithms, demonstrating improved accuracy and better-calibrated uncertainty estimates.

`Python` `TensorFlow` `Keras` `Machine Learning` `Deep Learning` `Uncertainty Quantification`

HYBRID STOCHASTIC–DEEP LEARNING VOLATILITY FORECASTING
Jul 2025 – Apr 2026

Research project

- Modelled TSX volatility as a stochastic regime-switching process with a hidden Markov model.
- Added forecasting to the hidden Markov model package hmmTMB and coupled it with an uncertainty-aware deep learning model using a custom loss function.
- Demonstrated improved responsiveness to covariate signals while staying robust to extreme market conditions by using epistemic uncertainty.

`Python` `R` `Hidden Markov Models` `Stochastic Processes` `Time Series Forecasting` `Deep Learning`

FORECASTING RADIO RECOMBINATION LINE SCIENCE
Sep 2025 – Jul 2026

MSc thesis, UBC Okanagan

- Scientific research project predicting the performance of a next-generation radio telescope.
- Extrapolated science results given the telescope design and existing surveys as priors.
- Thesis is available at https://duncancs.ca.

`Python` `Statistical Modeling` `Radio Astronomy`

SKILLS

A/B Testing · AWS · Business Intelligence · Data Engineering · Data Pipelines · Deep Learning · Entrepreneurship · Full Stack · GCP · Hidden Markov Models · Keras · Leadership · Machine Learning · NLP · Product Management · Python · R · Radio Astronomy · Reporting & Dashboards · Snowflake · SQL · Statistical Modeling · Stochastic Processes · Tableau · TensorFlow · Time Series Forecasting · Uncertainty Quantification