
Passionate about building scalable AI/ML systems for real-world problems in recommender systems, search, and ranking.

EXPERIENCE

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|--------------|---|
| 2025–present | Senior Staff Machine Learning Engineer. Shopify, Canada. |
| 2023–2025 | Staff Machine Learning Engineer. Shopify, Canada. <ul style="list-style-type: none">• Building generative foundation models for commerce and personalized recommendations.• Improving search using multi-modal embedding retrieval models and LLM-based relevance judgements. |
| 2021–2023 | Senior Data Scientist. Shopify, Canada. <ul style="list-style-type: none">• Led Shop app personalized recommendations retrieval and ranking, reaching 100M+ users.• Leveraged technologies including TensorFlow, XGBoost, Airflow, Spark, and Vertex AI on GCP. |
| 2018–2021 | Applied Scientist. Amazon, Canada. <ul style="list-style-type: none">• Enhanced Alexa’s natural language understanding through novel deep learning methods for entity resolution.• Utilized tools such as TensorFlow, PyTorch, Spark, FAISS, and Elasticsearch. |
| 2017–2018 | Senior Data Scientist. Canopy Labs, Canada. |
| 2015–2017 | Data Scientist. Canopy Labs, Canada. <ul style="list-style-type: none">• Built recommender systems and propensity models driving revenue growth for retail and travel clients.• Technologies used include Spark, MongoDB, TensorFlow, PyTorch, scikit-learn, and XGBoost. |
| 2013–2015 | Research & Teaching Assistant. York University, Canada. <ul style="list-style-type: none">• Designed reinforcement learning solutions for optimizing user interactions in configuration processes.• Researched approaches to improve search heuristics on multimodal optimization problems. |
| 2011–2013 | Research Assistant. Institute of Cybernetics, Mathematics and Physics, Cuba. <ul style="list-style-type: none">• Researched new estimation of distribution algorithms based on copulas and vines for optimization.• Developed and maintained R packages on CRAN for statistical dependence modelling using vines. |

EDUCATION

2013–2015

Master's degree, Information Systems & Technology.
York University, Canada.

- *Thesis:* Efficient Calculation of Optimal Configuration Processes.

2014–2015

Data Science Specialization.
Offered by Johns Hopkins University through Coursera.

2006–2011

Bachelor's degree, Computer Science.
University of Havana, Cuba.

- *Thesis:* Estimation of Distribution Algorithms Based on Copulas and Vines.

PATENTS

- Entity Resolution Using Acoustic Data, U.S. Patent No. US11817090B1. Work done at Amazon; filed December 2019, granted November 2023. <https://patents.google.com/patent/US11817090B1>

PUBLICATIONS

- Y. Gonzalez-Fernandez, S. Hamidi, S. Chen, S. Liaskos. (2019). Efficient Elicitation of Software Configurations Using Crowd Preferences and Domain Knowledge. *Automated Software Engineering*, 26(1), 87–123. <https://link.springer.com/article/10.1007/s10515-018-0247-4>
- Y. Gonzalez-Fernandez, S. Chen. (2015). Leaders and Followers – A New Metaheuristic to Avoid the Bias of Accumulated Information. In *IEEE Congress on Evolutionary Computation*, 776–783. IEEE. <https://dx.doi.org/10.1109/CEC.2015.7256970>.
- Y. Gonzalez-Fernandez, S. Chen. (2014). Identifying and Exploiting the Scale of a Search Space in Particle Swarm Optimization. In *Conference on Genetic and Evolutionary Computation*, 17–24. ACM. <https://doi.acm.org/10.1145/2576768.2598280>.
- Y. Gonzalez-Fernandez, M. Soto. (2014). copulaedas: An R Package for Estimation of Distribution Algorithms Based on Copulas. *Journal of Statistical Software*, 58(9), 1–34. <https://www.jstatsoft.org/v58/i09>.