Passionate about building scalable AI/ML systems to solve practical problems, with a special interest in recommender systems, search, and ranking applications.

## EXPERIENCE

2023–present	Staff Machine Learning Engineer. Shopify, Canada.
	<ul> <li>Building generative foundation models for commerce and personalized recommendations.</li> </ul>
	<ul> <li>Improving search using multi-modal embedding retrieval models and LLM-based relevance judgements.</li> </ul>
2021–2023	Senior Data Scientist. Shopify, Canada.
	<ul> <li>Led Shop app personalized recommendations retrieval and ranking, reaching 100M+ users.</li> </ul>
	<ul> <li>Leveraged technologies including TensorFlow, XGBoost, Airflow, Spark, and Vertex AI on GCP.</li> </ul>
2018–2021	Applied Scientist. Amazon, Canada.
	• 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.
	• Built recommender systems and propensity models driving revenue growth for retail and travel clients.
	<ul> <li>Technologies used include Spark, MongoDB, TensorFlow, PyTorch, scikit-learn, and XGBoost.</li> </ul>
2013–2015	Research & Teaching Assistant. York University, Canada.
	<ul> <li>Designed reinforcement learning solutions for optimizing user interactions in configuration processes.</li> </ul>
	<ul> <li>Researched approaches to improve search heuristics on multimodal optimization problems.</li> </ul>
2011–2013	Research Assistant. Institute of Cybernetics, Mathematics and Physics, Cuba.
	<ul> <li>Researched new estimation of distribution algorithms based on copulas and vines for optimization.</li> </ul>
	<ul> <li>Developed and maintained R packages on CRAN for statistical dependence modelling using vines.</li> </ul>

## EDUCATION

2013–2015	Master's degree, Information Systems & Technology. York University, Canada.
	• Thesis: Efficient Calculation of Optimal Configuration Processes.
2014–2015	<b>Data Science Specialization.</b> 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	<ul> <li>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</li> </ul>
PUBLICATIONS	• Y. Gonzalez-Fernandez, S. Hamidi, S. Chen, S. Liaskos. (2019). Efficient Elicitation of Software Configurations Using Crowd Preferences and Domain Knowledge. <i>Automated Software Engineering</i> , 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 <i>IEEE Congress on Evolutionary Computation</i> , 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 <i>Conference on Genetic and Evolutionary Computation</i> , 17–24. ACM. https://doi.acm.org/10.1145/2576768.2598280.
	<ul> <li>Y. Gonzalez-Fernandez, M. Soto. (2014). copulaedas: An R Package for Estimation of Distribution Algorithms Based on Copulas. <i>Journal of Statistical</i> <i>Software</i>, 58(9), 1–34. https://www.jstatsoft.org/v58/i09.</li> </ul>