

Jocelyn Beauchesne

Lead Research Engineer – Green Card Holder – 6+ years of experience

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Professional Summary

- Applied Scientist with 6+ years of experience delivering **impactful** ML Research and **scalable** AI systems.
- Dual Master's from MIT and École Polytechnique.
- Proven track record elevating key **business metrics**, spearheading ML **innovation**, and shaping **product** strategy.
- **Expert** in Generative AI, Data Science, and ML modeling. Former engineering **lead** at Hyperscience and Sizzle AI.

Experience

Sizzle AI — Founding Research Engineer, Machine Learning

New York City, NY | 2024 - 2025

- Partnered with the CEO (**ex-Meta VP of AI**), CTO and product team to lead core AI initiatives, driving platform growth from 0 to 1M+ courses created by users.
- Launched ML-powered A/B testing framework; executed 20+ experiments that **consistently boosted** key business metrics by an average 5-10%
- **Technical Leadership**
 - Architected **scalable** multi-stage pipelines powered by LLMs: knowledge extraction, content generation and retrieval
 - Designed and implemented a **recommendation system** to optimize feed of learning materials
 - **Enabled team** with key development pipelines: fine-tuning , data generation, evaluation loops, monitoring and analytics

Hyperscience — Engineering Manager, Machine Learning

New York City, NY | 2022 - 2023

- **Managed a team of 5 Senior ML Engineers**, reporting directly to the VP of AI (ex-Quora VP of AI)
- **Directed research** efforts for an unsupervised sampling approach leading to 70% reduction in annotation time with no impact to accuracy
- Supervised improvements in **model training time** by 60% through parallelization and dynamic early stopping

Hyperscience — Machine Learning Engineer

New York City, NY | 2022 - 2022

- Spearheaded Active Learning engine **patented** as [P3](#) resulting in 40% reduction in annotation costs
- **Mentored** a team of NYU Data Science Graduate students on Question Answering on Long Context, winning best poster award (see [P4](#))
- Improved **Transformer** based information extraction model accuracy on out-of-distribution sample by 20%

Abnormal Security — Machine Learning Engineer

New York City, NY | 2019 - 2020

- Improved automatic detection of advanced attacks by **+100% without drop in accuracy**, thus reducing load of costly experts annotators
- Researched **Deep Learning** approaches to iteratively raise performance with **A/B testing** (NLP, ensembling, etc)

BNP Paribas – Research Intern

Artificial Intelligence Lab | 2018 - 2018

- **Published Research:** Leveraged Generative Adversarial Networks models to develop a noise-resistant Optical Character Recognition solution, achieving a 47% reduction in error rate compared to existing commercial solutions (see [P2](#))

Education

Massachusetts Institute of Technology	Cambridge, MA
M.S. in Business Analytics (Operations Research Center) (GPA 5.0/5.0)	2019
Relevant Coursework: Machine Learning, Deep Learning, Robust Optimization, Applied Probability and Stochastic Models Research Assistant for Pr. Vivek Farias (MIT - Operations Research) for Causal Inference study	
Ecole Polytechnique (# 1 Grande Ecole in France)	Palaiseau, France
M.S. in Applied Mathematics (GPA 3.8/4.0)	2017 - 2018
Relevant Coursework: Machine Learning, Stochastic simulation, Statistical Graph Theory, Topological Data Analysis	
B.S. in Applied Mathematics	2015 - 2017
Relevant Coursework: Optimization, Modeling Random Events, Real Analysis, Differential Calculus and Complex Analysis, Algorithm Design and Analysis, Massive Data Processing, Molecular Biology and Genetic Information, Macroeconomics, Quantum Mechanics	
Lycée Michel de Montaigne	Bordeaux, France
Preparation Study For Highly Selective Entrance Exams To Grandes Écoles (Equivalent of Triple Major: Mathematics, Physics, Computer Science)	2012 - 2015

Accomplishments & Publications

A1 #1 Place Citadel Datathon, MIT 2019	
P1 Effect of fibrinogen concentrate administration 2020 on early mortality in traumatic hemorrhagic shock: a propensity score analysis	
SR Hamada, R. Pirracchio, J. Beauchesne Journal of Trauma and Acute Care Surgery, 2020	
P2 Data Augmentation via Adversarial Networks for Optical Character Recognition	
Jocelyn Beauchesne and Victor Storchan International Conference on Document Analysis and Recognition (ICDAR), 2018	
P3 Filed Patent: Real Time Machine Learning For Guided Document Annotations	
Hyperscience	Filed 2023
P4 Blog Post: Machine Learning Mentorship with NYU Graduate Students	
Jocelyn Beauchesne (Mentor)	Team won best poster award Link
P5 Filed Patent: Discovering Graymail Through Real-Time Analysis Of Incoming Email	
Abnormal Security	Filed 2020
P6 Filed 6 Patents on Unsupervised Anomaly Detection of vulnerabilities and cyber-attacks	
Rapid7	Filed 2019

Skills

Programming:	Python (Expert), R, OCaml, Julia, Java, C++, SQL, React
Machine Learning:	PyTorch, transformers, scikit-learn, langchain, llama_index, Keras, RAG, LLM, NLP, CV
Cloud Compute:	AWS, GCP, GPU computing
Software:	Unix (Linux, MacOS), git, docker
Languages:	English (Fluent), French (Native), Spanish (Conversational)
Misc:	Judo Black belt, Photography