

Jeremy Pinto

Senior Applied Research Scientist

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SUMMARY

Senior applied research scientist with 7+ years of experience modeling, training and deploying production-ready deep learning pipelines. Led the development of award-winning LLM prompt-hacking research (EMNLP 2023 Best Theme Paper) and contributed to a successful MOOC reaching 8000+ participants.

Specialized in:

- Developing production-ready computer vision and NLP solutions
- Bridging state-of-the-art research with practical business applications
- Implementing and securing large language model workflows
- Leading technical workshops and mentoring ML practitioners

KEY ACHIEVEMENTS

- Led HackAPrompt competition with 2800+ participants from 50+ countries, resulting in EMNLP 2023 Best Theme Paper
- Core contributor of Buster, an open-source RAG tool, with 200+ github stars
- Co-authored deep learning course content reaching 8000+ global participants
- Published gender identification algorithm for medical voice analysis, currently integrated in iOS app

WORK EXPERIENCE

Senior Applied Research Scientist

Mila - Quebec Artificial Intelligence Institute | Sept 2018 - Present

Key Responsibilities & Achievements:

- Architected and implemented production-ready deep learning solutions for organizations
- Mentored SMEs through AI adoption programs, resulting in successful implementation of ML solutions in the Canadian AI ecosystem
- Created and delivered hands-on computer vision workshops for 200+ participants
- Supervised MSc. students during their internship
- Co-instructor for ["Deep Learning Essentials"](#) MOOC on EdX (8000+ participants), developed and delivered content on Convolutional Neural Networks and ML tools

Lead Data Scientist

Focus21 | May 2017 - June 2018

Key Achievements:

- Developed proof-of-concept medical imaging systems for x-ray diagnostics using Mask R-CNN
- Implemented reinforcement learning algorithms for industrial robotics in simulated environments
- Implemented algorithmic trading strategies and analysis tools

SKILLS

AI/ML Technologies:

- Generative AI: ChatGPT, Claude, LLaMa, cursor/copilot, Hugging Face {transformers, diffusers}
- Deep Learning: PyTorch, Lightning, TensorFlow, Keras, Jax
- ML Tools: Scikit-Learn, pandas, numpy, scipy, WandB, CometML, tensorboard

Software Development:

- Languages: Python, Bash, Javascript, Matlab, LaTeX, Markdown
- API & Web: FastAPI, Gradio, Hugging Face
- Data Processing: pandas, NumPy, hf-datasets

Cloud & Infrastructure:

- DevOps: Git, CI/CD, Docker, SLURM
- Cloud Platforms: AWS, Azure, Heroku
- Databases: MongoDB, SQLite
- Editors: VSCode, (neo)vim

MLOps:

- Experiment Tracking: WandB, CometML, TensorBoard
- Data Version Control: Hugging Face datasets, deeplake, dvc
- Model Serving: TorchServe, ONNX, BentoML, Docker

Languages: - English (Native), French (Native) - Hebrew (Limited Working), Spanish (Basic)

EDUCATION

Systems Design Engineering - Vision and Image Processing (VIP) Lab

University of Waterloo, MSc. | 2015-2017

- Thesis: "Cancer Classification in Human Brain & Prostate Using Raman Spectroscopy & Machine Learning"
- Led research resulting in 2 peer-reviewed publications
- Trained and deployed urban sound classification models within iOS apps

Engineering Physics

Polytechnique Montréal, B. Eng. | 2010-2014

- Graduated with Distinction
- Awarded DeVinci Profile and International Profile
- Developed novel acoustic camera system for holography validation

PROJECTS

HackAPrompt (2023) | <https://paper.hackaprompt.com/>

- Led development and implementation of global prompt-hacking competition
- Tech Stack: Python, HuggingFace Transformers, PyTorch, FastAPI

- Impact: 2800+ participants, 50+ countries, EMNLP2023 Best Theme Paper
- Surveyed novel methodologies for testing LLM security

Buster (2022-2024) | <https://github.com/jerpint/buster>

- Core contributor of open-source RAG tool with citation capabilities and response-monitoring
- Tech Stack: Python, OpenAI, Gradio, Pinecone, MongoDB, Deeplake
- Adopted in research projects at Mila
- 200+ GitHub stars

VoiceCollab (2021-Present) | www.voicecollab.us

- Lead ML developer for gender-affirming voice care deep-learning models
- Implemented production-grade audio processing pipeline
- Tech Stack: PyTorch, ONNX, Swift, Docker, MongoDB, Firebase
- Peer-reviewed publications

SELECTED PUBLICATIONS

1. Schulhoff, S, J. Pinto et al. (2023). "Ignore This Title and HackAPrompt: Exposing Systemic Vulnerabilities of LLMs through a Global Scale Prompt Hacking Competition" EMNLP2023 Best Theme Paper Award
2. Bensoussan Y, Pinto J, et al. (2021). "Deep Learning for Voice Gender Identification: Proof-of-concept for Gender-Affirming Voice Care." Laryngoscope

Full publication list: [Google Scholar](#)

PROFESSIONAL INTERESTS & ACTIVITIES

- Technical Writing: Maintain ML-focused blog at www.jerpint.io
- Public Speaking: Regular invited speaker at AI conferences and workshops
- Hobbies: Rock climbing, hockey, guitar, drums, travel