Jesse Brizzi

Machine Learning | Backend Engineering | Computer Vision | Data Science

Location New York City
Website jessebrizzi.com
Email jessebrizzi@gmail.com
Citizenship US Citizen

EDUCATION

Stony Brook University
Masters **3.96 GPA**
- Computer Science
- CV and ML Specialization

University of South Florida
Bachelor of Science **3.92 GPA**
- Computer Science

FELLOWSHIPS

- NSF GRFP Fellow
- W. Burghardt Turner Fellow

PUBLICATIONS

Automatic expression spotting in videos *Aug, 14*
Image and Vision Computing

Optical Flow Based Expression Suppression in Video *Aug, 14*
International Conference on Pattern Recognition

SKILLS

Programming Languages
Python, SQL, Scala, Java, C++

ML & Computer Vision
Computer Vision: Object Detection, Image Classification
ML Operations: Model Deployment, Experiment Tracking, Training Pipelines
Neural Networks: CNN, Feature Extraction, Embeddings

Cloud & Infrastructure
AWS/GCS
Distributed Systems
Microservices Architecture
Serverless Computing

Dev Practices
System Design
API Development
Production Monitoring
Performance Optimization

Last Updated: December 2024

Two Sigma — Vice President Software Engineer — *July 22 - Now*

Led multiple high-impact initiatives focused on ML research tooling and model productionization
- Designed and implemented an enterprise template system for ML model productionization that has been adopted for over 50% of all production models in a major business unit, significantly reducing deployment costs and accelerating time to market by several weeks
- Architected and delivered automated research pipeline solutions supporting parallel model training, modernizing research workflows and enabling rapid experimentation at scale
- Spearheaded operational integrity improvements for critical ML systems generating significant revenue, including modernizing libraries and implementing enhanced compliance controls

Led evaluation of enterprise ML experiment tracking solutions, conducting analysis of SaaS and on-premise options while coordinating with security, infrastructure, and business stakeholders

Technical Leadership & Community Impact:
- Serve as trusted reviewer for production trading model deployments
- Mentor junior engineers and lead engineering best practices initiatives
- Tech Lead for diversity-focused college mentorship program
- Lead contributor to engineering interview preparation resources and documentation

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Meta — Senior Machine Learning Software Engineer — *Mar 20 - Jun 22*

Tech Lead driving high-impact search products through XFN collaboration and team building

Shipped Instagram Shopping Visual Search, founding member of a 0 - 1 project
- Designed and implemented backend visual search platform, indexing and retrieval for approximate nearest neighbor search of product corpus on internal search infrastructure.
- Drove successful collaboration, adoption and standardization with partner XFN teams.
- Coordinated with research teams to productionize state-of-the-art deep learning models for object detection, image embedding, classification, and feature extraction.

Shipped Instagram Shop Tab Typeahead, founding member of a 0 - 1 project.
- Designed and implemented backend for typeahead suggestions across all storefronts.

- Ensured best practices for monitoring, scaling, and maintaining services at Meta's size/scale.
- Achieved top interviewer status within organization
- Mentored engineers on SQL optimization, data pipeline development, and system design
- Led onboarding programs for new team members

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inferdo — Founder — *May 19 - Mar 20*

A performant, scalable, and affordable Computer Vision API
- Lead/Designed/Developed the Inferdo platform and API
- Product Management for the API's targeted applications and markets
- Company branding, design, and web dev

Curalate — Machine Learning Research Engineer — *Jun 16 - Jan 20*

Architected and deployed high-performance Computer Vision and Recommendation services in Scala/C++, processing 500M+ monthly requests using Caffe/MXNet.
- Backend Scala development for social media SaaS platform. AWS microservice stack.
- Researched and released production computer vision classification and detection models.
- Created and managed proprietary datasets for use in training deep learning models

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CAE — Industry Co-op — *Aug 13 - May 14*

- C++ and Network Dev project focused on high-performance video transmission.

Raytheon — Industry Co-op — *Jan 13 - May 13*

- Developed an Android application to assess human vital signs through non-contact means.

SMC Software — Junior Software Engineer — *Jun 12 - Apr 13*

- ASP.NET development for an online reservation System.