

DEVESH AGARWAL

✉ deveshagarwal@berkeley.edu in /deveshagar
📍 New York, New York ☎ +1 (646) 472-6148



A curious and entrepreneurial generalist with strong expertise in designing and implementing end-to-end ML and AI pipelines in computer vision, marketing tech, and agentic computing, I am driven by a passion for using technology to solve real-world challenges and create tangible value.

EXPERIENCE

Thumbtack, Inc.

Member of Technical Staff, Applied Science

📅 Feb 2025-Present 📍 New York City, NY

- Building **agentic micro-simulations** of the two-sided marketplace to model coordination of marketing and supply-shaping at local granularities increasing company-wide revenue by 2%.
- Designing **Thumbtack 2.0**, an agentic orchestration MCP layer that extends the marketplace for an agent-mediated world - defining how customer and pro agents discover, negotiate, and transact.
- Built patent-pending **image generation and evaluation pipelines** and **multimodal context-detection models** powering generation of ad creative, sample images, ranking, and quality control across categories, powering 100% search ads.

Equinix, Inc. | ML/AI Research

Machine Learning Engineer I, II (Technical Lead)

📅 May 2021 - Jan 2025 📍 New York City, NY

- Led a team of four to build full-stack computer vision algorithms for security and operations in 200+ data centers using CCTV and robots forecasted to cost-cut 10M\$.
- Designed and fine-tuned a robust Retrieval Augmented Generation (RAG) LLM to build a unified dialogue agent for our data centers database, used by 100k+ stakeholders worldwide.

Machine Learning Engineer Intern

📅 May 2020- May 2021 📍 San Francisco Bay Area

- Predicted customer churn using an ensemble of gradient boosting models (LGBM + XGBoost) and Recurrent Neural Networks impacting 10k+ companies' client accounts across 500k+ assets.

LaunchPad AI

Co-Founder (Early Development)

📅 July 2024-Present 📍 New York City, NY

- Building a solution to enable automated application development for small and medium businesses using LLM-enabled infrastructure design and deployment.

Visa, Inc. | Cybersecurity

Data Science Intern

📅 May 2019-August 2019 📍 San Francisco Bay Area

- Built a Scala-based pipeline for extraction of 800k+ Linux server logs daily using SparkSQL and 25M datapoints from Splunk and Kafka. Used by 600+ Cybersecurity employees.
- Automated anomaly detection in user access across internal servers using a peer grouping model. Saves 1200+ work hours per week for Cyber Investigations.

EDUCATION

Computer & Data Science

University of California, Berkeley

📅 May 2021 📍 Berkeley, CA

Business Administration

Haas School of Business, Berkeley

📅 May 2021 📍 Berkeley, CA

Sutardja Certificate

UC Berkeley, College of Engineering

📅 May 2021 📍 Berkeley, CA

PROGRAMMING

- Languages Python | Java | Scala | SQL
- Modules PyTorch | Keras | TF | OpenCV
- Data Hadoop | Spark | Splunk | Tableau
- MLOps GCP | Azure | Airflow
- GenAI HuggingFace | Llama | OpenAI

COURSEWORK

- Advanced Machine Learning
- Decision Theory Consumer Behavior
- Artificial Intelligence
- Machine Structures/ Architecture
- Data Structures and Algorithms
- Advanced Probability Computer Vision
- Intro to Data Science (Teaching 4x)

PROJECTS

- EthiCar, Self-Driving Prototype**
Built a car that detects traffic signs, pedestrians, or animals and makes ethical decisions.
- Chess Tutor**
Image-recognition chess model that can learn from your mistakes as you play and guide your learning.
- SETI Research Institute**
Analyzed sound waves from space to try to detect alien communication.