**Michael Murphy** *Machine Learning / Software Engineer*

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# Profile

Results-driven **Machine Learning & Software Engineer** with 5+ years of experience building scalable, production-grade ML systems and full-stack web applications. Proficient in **Python**, **React**, **Django**, and **AWS**, with expertise in **LLMs**, **NLP**, and **MLOps**. Proven ability to deliver end-to-end solutions that combine intelligent automation with modern web interfaces.

# Professional Experience

02/2023 – 05//2025

New York

04/2021 – 12/2022

New York

06/2020 – 03/2021

Denver, CO

## Senior Machine Learning Engineer

*Guideline*

Developed and deployed a **real-time fraud detection** system that reduced false positives by 30% and improved detection accuracy by 25%

Built a **NLP-powered virtual assistant** for scheduling appointments and answering health-related FAQs using Hugging Face Transformers and Rasa, reducing response latency under 1s for 100+ intents.

Utilized **Langchain** to build modular and scalable prompt workflows for NLP tasks, enhancing the performance of customer support systems

Led **MLOps** integration using **MLflow** and **Docker**, cutting deployment time by 40% Collaborated with cross-functional teams to productionize models via REST APIs on AWS

## Software Engineer

*Instabase*

Built predictive models for financial forecasting and risk classification using ensemble techniques

Designed and deployed end-to-end ML pipelines **for real-time recommendation systems** (reduced churn by 17%)

Automated data pipelines with **Airflow**, reducing manual **ETL time by 60%**

Designed and deployed an admin portal using **Django + React** for product analysts to manage ML experiments and model metadata.

Collaborated with UX designers to implement responsive UIs with **Tailwind CSS**. Implemented computer vision models (CNN) for **document parsing** (85%+ accuracy) Integrated **Langchain** for building dynamic prompt-based solutions, enabling more flexible text extraction and classification

Conducted A/B tests and model performance monitoring in production

## Data Analyst Intern

*Grammarly*

Assisted in collecting and preprocessing sales data for forecasting models Built simple linear regression models to analyze regional sales trends Presented findings to non-technical stakeholders

Built dashboards in **Plotly Dash** and performed trend analysis with **SQL** and **Pandas** to support marketing strategies.

# Education

09/2015 – 05/2020 **B.S. in Computer Science**

*Hunter College*

# Skills

NLP

Computer Vision Apache Kafka Hugging Face Vertex AI PyTorch

Scikit-learn Pandas Numpy Kubernetes SQL

Javascript / Typescript FastAPI

Django Tailwind CSS

Google Cloud Platform

LLM

Apache Airflow PySpark Langchain Snowflake Tensorflow React

R

MLflow Docker Python Java Flask

Material UI AWS

Microsoft Azure

# Languages

English