## Carth Onasi

#### Machine Learning Engineer & Data Science Leader

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# **Summary**

Results-driven Machine Learning Engineer with 12+ years of experience building and deploying production ML systems at scale. Proven track record of leading cross-functional teams and delivering impactful AI/ML solutions across fintech, e-commerce, and healthcare domains. Passionate about turning cutting-edge research into practical applications and mentoring next-generation tech leaders.

#### **Professional Experience**

## **Director of Machine Learning**

HealthTech AI Healthcare Technology Company | Remote | 01/2023 - Present

- Lead a team of 25 ML engineers and data scientists across three continents developing AI solutions for healthcare
- Architected and implemented an automated medical imaging analysis platform processing 1M+ scans monthly
- Developed novel few-shot learning approaches for rare disease detection, improving accuracy by 35%
- Established company-wide MLOps practices and governance frameworks for responsible AI development
- Reduced cloud computing costs by 45% through optimization of training and inference pipelines
- Spearheaded adoption of synthetic data generation techniques for handling sensitive medical data
- Built and deployed HIPAA-compliant LLM solutions for medical documentation and patient communication

### **Senior Machine Learning Engineer**

**TechCommerce** Leading E-commerce Platform | Remote | 06/2020 - 12/2022

- Led a team of 5 ML engineers developing personalization and recommendation systems serving 50M+ daily active users
- Architected and implemented a real-time ML feature store reducing model inference latency by 60%
- Spearheaded migration of ML infrastructure to Kubernetes, improving model deployment velocity by 3x
- Built automated A/B testing framework for ML experiments, enabling 5x more concurrent model evaluations
- Developed custom transformer models for product search ranking, improving conversion rates by 15%
- Implemented MLOps best practices including monitoring, versioning, and automated retraining pipelines
- Created anomaly detection systems for fraud prevention, saving \$10M+ annually

#### **Lead Data Scientist**

DataCorp Data Analytics Consultancy | Boston, MA | 07/2015 - 02/2018

- Led team of 8 data scientists delivering solutions for Fortune 500 clients
- Developed predictive models for client churn reduction and customer segmentation
- Built ETL pipelines and data warehousing solutions processing 5TB+ daily
- Created interactive dashboards and visualizations using modern BI tools
- Conducted statistical analysis and A/B testing to optimize marketing campaigns
- Implemented computer vision solutions for retail inventory management
- Reduced client reporting time by 80% through automation

### **Machine Learning Research Engineer**

Tech Giants Inc Global Technology Company | Seattle, WA | 06/2012 - 06/2015

- $\bullet$  Conducted research in natural language processing and computer vision
- Developed novel architectures for multilingual machine translation
- Published 3 papers at top ML conferences (NeurIPS, ICML)
- Created distributed training frameworks for large-scale model training
- $\bullet$  Improved speech recognition accuracy by 25% for non-native English speakers
- $\bullet$  Filed 5 patents for ML innovations in speech processing

# Education

### M.S. in Computer Science

Stanford University | 09/2010 - 06/2012

- Thesis: "Efficient Training Methods for Large-Scale Neural Networks"
- GPA: 3.95/4.0

### **B.S.** in Statistics

University of California, Berkeley | 09/2006 - 05/2010

- Minor in Computer Science
- Graduated Summa Cum Laude

# Skills

Programming Languages: Python, SQL, Java, Scala, Go, R, C++, Julia

Technologies: AWS, GCP, Azure, Kubernetes, Docker, Apache Spark, Kafka, TensorFlow, PyTorch, JAX, scikit-learn, MLflow, Airflow, Ray, Kubeflow, Vertex AI, SageMaker

Business: Agile Methodologies, Technical Leadership, Project Management, Cross-functional Collaboration, Strategic Planning, Budget Management

## **Publications**

Nature Machine Intelligence: "Robust Few-Shot Learning in Medical Imaging" (2023)

Journal of Machine Learning Research: "Efficient Training of Large Language Models in Resource-Constrained Environments" (2022)

**NeurIPS:** "Scalable Multi-Agent Reinforcement Learning for Market Making" (2021)

# **Open-Source Contributions**

Maintainer - HyperDrive: Created an open-source distributed training framework for large-scale ML models

 $\textbf{Contributor - MLflow:} \ \textbf{Added support for automated model versioning and deployment workflows}$ 

Creator - KafkaML: Developed a library for real-time ML inference using Apache Kafka streams

Maintainer - MedicalAI: Built open-source medical image analysis toolkit used by 50+ research institutions