Marcus Rodriguez

Education

Massachusetts Institute of Technology

Sep. 2018 – May 2022

Bachelor of Science in Computer Science and Engineering

Cambridge, MA

Google AI Research Internship Program

Jun. 2021 – Aug. 2021

Research Focus: Large Language Models and Knowledge Graphs

Mountain View, CA

Experience

Senior Software Engineer

Jan. 2023 - Present

Anthropic

San Francisco, CA

- Developed core infrastructure for Claude's training pipeline, processing 50+ billion tokens daily
- Implemented distributed training optimizations reducing model training time by 35%
- Led team of 6 engineers building safety evaluation frameworks for large language models
- Designed and deployed real-time monitoring systems handling 1M+ API requests per minute

Machine Learning Engineer

Jun. 2022 - Dec. 2022

OpenAI

San Francisco, CA

- Built reinforcement learning from human feedback (RLHF) systems for GPT model alignment
- Optimized inference serving infrastructure reducing latency by 40% across all model endpoints
- Collaborated on research leading to 3 publications in top-tier ML conferences
- Mentored 5 junior engineers and established best practices for model evaluation

Software Engineering Intern

May 2021 - Aug. 2021

Meta AI Research

Menlo Park, CA

- Developed novel attention mechanisms for multimodal transformers processing text and images
- Implemented efficient batching algorithms improving training throughput by 25%
- \bullet Created comprehensive testing suite with 95% code coverage for ML training pipelines

Projects

Neural Code Search Engine | Python, PyTorch, Elasticsearch, React

2023

- Built semantic code search system using CodeBERT embeddings, indexing 10M+ code repositories
- Achieved 92% accuracy on code similarity tasks, deployed to 50K+ developers at Anthropic

Real-time Sentiment Analysis API | FastAPI, Docker, AWS, Redis

2022

- Designed scalable microservices architecture processing 100K+ social media posts per hour
- Implemented custom transformer models fine-tuned on domain-specific data with 96% F1-score

Distributed Training Framework | PyTorch, Kubernetes, gRPC

2021

- Open-source framework for efficient multi-GPU training, adopted by 15+ research institutions
- Reduced communication overhead by 60% using gradient compression and asynchronous updates

Technical Skills

Languages: Python, C++, JavaScript, Go, Rust, SQL

Frameworks: PyTorch, TensorFlow, React, FastAPI, Django, Flask

Developer Tools: Git, Docker, Kubernetes, AWS, GCP, Jenkins, Terraform Libraries: NumPy, Pandas, Scikit-learn, Hugging Face, OpenCV, CUDA Databases: PostgreSQL, MongoDB, Redis, Elasticsearch, Pinecone

Leadership & Activities

MIT AI Safety Club

Sep. 2020 - May 2022

President and Founder

Cambridge, MA

- Founded student organization focused on AI alignment research, growing membership to 200+ students
- Organized 12 technical workshops and hosted speakers from leading AI research labs

Google Summer of Code

May 2020 - Aug. 2020

Open Source Contributor - TensorFlow

Remote

- Contributed performance optimizations to TensorFlow's distributed training module
- Mentored by Google engineers, code merged into main repository used by millions of developers