

INDEPENDENT CONTRACTOR | SHORT-TERM ENGAGEMENTS

2020 - 2023

TEMPLE CAPITAL | QUANTITATIVE INVESTING STRATEGIES

2022: ML Engineering Consultant

- Optimized custom in-house Julia investment strategy analysis engine
- Expanded support for synthetic assets to investment analysis platform
- Independently built CI/CD Pipeline from Scratch
- Established org-wide coding style guidelines and formatting

BLUE ROSE RESEARCH | PUBLIC OPINION MODELING & RESEARCH

2021: Senior Machine Learning Engineer

- Optimized TF-Probability Variational Inference pipelines inferring public opinion distributions given noisy data
- Optimized database queries to speed up time-consuming operations

FACEBOOK | HATE SPEECH ENGINEERING

2017 - 2020: Software Engineer - Machine Learning & Infrastructure

- Developed Facebook's first proactive hate speech classifiers in English, French, Arabic, and Portuguese
- Met with market-specific subject matter experts to identify and address unique market challenges in specific regions
- Optimized models to run billions of times per day
- Integrated computer vision signals to create multi-modal classifiers
- Integrated highly-multi-lingual transformers to improve classifier performance (XLM-R)
- Identified and addressed novel issues in existing training pipeline infra causing unintended classifier behavior
- Built custom volume-adjusted thresholding system to optimize use of human experts' time to maximize per-sample training value while prioritizing high-impact content
- Developed stratified offline datasets to enable rapid testing and iteration.
- Built fully-automated classifier deployment pipeline capable of daily updates across multiple languages with A/B tested pilot models
- Surfaced issues impacting user well-being

LENDINGROBOT | PEER LENDING INVESTMENTS

2016 - 2017: Senior Backend Engineer; Financial Data Analyst

- Delivered **machine-learning investment strategy** for world's first peer-lending automated portfolio platform
- Weekly reports to CEO on investments/tech/recommendations
- Automated data collection from multiple sources
- Delivered consistent 6.5+% returns on over \$50 million of client investments
- Notarized investment records on the Ethereum blockchain

AMAZON | AWS NETWORKING

2014 - 2015: Systems Engineer II

- Automated testing pipeline for the custom networking software AWS runs on physical routers, reducing testing cycle from weeks to hours
- Built custom tools to automate management of highly specialized hardware.
- Built novel Docker deployment to enable multiple teams to test physical network interfaces on a device in isolation from each other

DEMOCRATIC NATIONAL COMMITTEE | SYSTEMS ENGINEERING

2011 - 2013 : Linux Systems Engineer | 2013 : Lead Systems Engineer

- Built/owned 1000's of metrics to maximize uptime of critical infra 24/7
- Revamped backup system to achieve better fidelity, 2x cheaper and 3x faster
- Saved over \$100k by analyzing TCO on physical vs cloud DB solutions
- Supported multiple teams by building an automated webpage capture system

UNIVERSITY OF CHICAGO | UNDERGRADUATE

Class of 2010: Computer Science with a Concentration in Artificial Intelligence