Jeffrey Berger, Ph.D.

Senior Technology Leader | Jeffrey.J.Berger@gmail.com

- Veteran early-startup full-stack IC and technical manager.
- I specialize in rapid go-to-market of MVPs as well as complete rebuild of legacy systems and underperforming technical teams.
- Every position I have had has been at least 50% IC, leading the technical team and removing blockers from my team members to maximize velocity.

EXPERIENCE

CTO	Qognitive	Jan 2024 - Present

I am a founding team member building out a team of specialists to deploy a quantum ML algorithm as a SAAS product on a rapid timeline. The ML algorithm in python and C have been impelemted by myself as well as several fundamental theoretical extensions of the algorithm, including the pytorch integration and the quantum-hardware prototype of the algorithm.

CTO	Duality Group	May 2021 - Jan 2024
Director	Duality Group	June 2019 - May 2021

As the first domestic technical hire I then engaged on a rebuild of the core algorithm-execution system from a C# monolith to a Python service architecture. The python system decreased the engineer headcount from 30+ consultants to 3 in-house engineers. Execution time for the algorithms dropped allowing much larger and more complicated algorithms. As of 2024 the system was running well over 100x the number of calculations in the same time as the system it replaced with 1/10th the number of engineers.

Director of Engineering	RotoQL	Feb 2018 - May 2019
Head of Architecture	RotoQL	Apr 2017 - Feb 2018

Hired as the first engineer to build a fantasy sport app from scratch. Built out a team and constructed a service based architecture that served thousands of users executing constrained-integer-optimization problems. The service system was extended to handle data ingestion for a betting product as well as SSO for our customers.

SRE Manager	Knewton	Jan 2017 - Apr 2017
Senior Database Engineer	Knewton	Sept 2015 - Jan 2017

Led a team of engineers to manage 150 node Cassandra deployment. Scaling operations were automated, costs were reduced by 60% and reliability increased.

Lead Database Engineer	Sailthru	October 2014 - Sept 2015
Database Engineer	Sailthru	August 2013 - October 2014

Stabilized one of the largest distributed MongoDB systems in the world at the time and executed a physical datacenter migration without downtime while decreasing alerts 10x and saving $1+M/yr.

Developer	We-Care.com	March 2013 - August 2013

EDUCATION

Ph.D Physics | Pennsylvania State University - 2012
B.S. Physics (Honors), B.A. Mathematics | SUNY Binghamton - 2007

TECHNICAL SKILLS

- C/C++
- Bash/Linux
- MongoDB
- MySQL
- Python
- Cassandra
- React
- Ansible

Journal publications, conference proceedings, talks, and references available upon request