

Aditya Diwakar

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github.com/adityaxdiwakar

(470) 302-9648

EDUCATION

Georgia Institute of Technology

Dual B.S. in Computer Science, Mathematics; Major GPA: 4.0

Atlanta, GA

Aug 2019 - Dec 2023

Dual Enrolled: 2019 - 2020 (Part-Time), 2020 - 2021 (Full-Time)

Concentration: Systems & Architecture, Intelligence; Probability & Statistics

Courses: Machine Learning, Stochastic Processes, Algorithms: Design & Analysis, Numerical Analysis, Probability & Statistics, Combinatorics, Abstract Algebra

EXPERIENCE

D.E. Shaw & Co. – Site Reliability Engineering

Incoming Software Engineering Intern

New York, NY

May 2022 - Aug 2022

Loganov Data

Operations/Research Head, Founder

Remote

Jun 2020 - Jul 2021

- Forecasted natural gas demand volatility with 92% accuracy through probabilistic/regressive models
- Ingested weather vendor data 84% faster than industry standard with low-level parallel processing
- Provided low-latency data reliably to hundreds of end-users with RESTful & GraphQL APIs

Code the Universe

President, Board Member

Kansas City, KS

Apr 2020 - Jul 2020

- Provided learning resources to ~2,500 students while managing 30 direct reports
- Rebuilt registration system with in-house course registrars resulting in 100% increased registrations
- Reduced redundant administrative oversight by 50% by implementing robust policies and processes

NetVPX Hosting LLC

VP of Technical Operations, CTO

Boston, MA

Apr 2020 - Jul 2020

- Led initiative developing custom hosting provisioning tools and additional product SKUs
- Ensured 99.97% site reliability by maintaining and signing SLA obligations
- Recruited technical staff ensuring same hour ticket response time and smooth onboardings

PROJECTS

OCamlC-3 | OCaml, Assembly, LC-3, Regex, PL Theory

Nov 2021

- Developed assembler for LC-3 Assembly with custom lexing, parsing, and composition
- Implemented command-line interface with interactive views for each step of assembly

Open Exchange | OCaml, TCP/IP, NYSE FIX, Switching/Routing

Dec 2020

- Implemented exchange suite with OCaml and NYSE FIX protocol supporting many order types
- Outperformed gold standard performance by profiling data structure designs with `ocamlprof`
- Integrated versatile reliability into design with usage of passive matching engines, cancel fairies, etc.

Flux | Go, Websockets, State Machines, OAuth2

Jan 2020

- Provided a developer friendly API to communicate with TD Ameritrade data provisioner
- Built translation units converting streamed message data into a requester/receiver data model
- Tested to 100% code coverage with unit tests run automatically in Continuous Integration workflow

Blueberry | Go, Websockets, PostgreSQL, Redis, Docker, RESTful

Jan 2020

- Exposed CQG data feed providing high-throughput low-latency top-level quote access
- Consumed by endusers through any of: RESTful & GraphQL APIs, TCP, UDP, or Web sockets
- Built with performance in mind; capable of handling millions of message distributions daily

SKILLS SUMMARY

Languages: Go, Python, Java, C/C++, OCaml, Rust, SQL

Tools: Kubernetes, Docker, CI/CD, Sentry, Kafka, Nginx, Caddy

Infrastructure: Routing/Switching, Load Balancing, Proxying, Delivery Networks, Matching Engines

Finance: Futures, Options, Stochastics, Hypothesis Testing, Commodities, Volatility