

Aditya Diwakar

aditya.diwakar@gatech.edu

github.com/adityaxdiwakar

(470) 302-9648

EDUCATION

Georgia Institute of Technology

Atlanta, GA

Dual B.S. in Computer Science & Mathematics, GPA: 3.95 / Major GPA: 4.0

Aug 2020 – Dec 2023

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

Concentrations: Systems & Architecture, Machine Learning; Probability & Statistics

Courses: *Processor Design, Operating Systems, Real Analysis, Automata Theory, Systems & Networks, Computer*

Architecture, Machine Learning, Stochastic Processes, Algorithm Design, Numerical Analysis, Combinatorics

EXPERIENCE

D. E. Shaw & Co.

New York, NY

Software Engineering Intern

May 2022 – Aug 2022

- Reduced cost of automation & SRE toil by designing a framework to easily deploy infrastructure workflows
- Implemented GSSAPI SSH handshake to programmatically interact with Kerberos-secured host machines
- Built dial tone service to ensure product reliability during outages & monthly releases leveraging Temporal.io
- Increased automation workflow visibility by providing Elasticsearch integration by default
- Performed analysis on the cost of manual labor by interviewing operations-burdened engineers

Georgia Institute of Technology

Atlanta, GA

Lead Teaching Assistant

Jan 2022 – Present

- Taught algorithm design, recurrences, graph theory, and complexity theory to 200+ students
- Ensured course and student success by organizing assignments/exams and delegating work for other TAs
- Achieved 4.9/5 student rating through course management, grading orchestration, and transparency

Loganov Data

Remote

Founder, Research Software Engineer

Jun 2020 – Jul 2021

- Forecasted natural gas demand volatility with 92% accuracy through probabilistic & regressive models
- Ingested weather vendor data 6x faster than industry standard with low-level parallel processing
- Provided low-latency data reliably to hundreds of end-users with RESTful & GraphQL APIs

NetVPX Hosting

Boston, MA

Vice President of Systems

Oct 2018 – Jul 2019

- Led initiatives to develop custom hosting provisioning tools and additional product SKUs
- Ensured 99.97% site reliability by maintaining and signing SLA obligations

PROJECTS

- **OCamlC-3:** Developed assembler for LC-3 assembly with custom lexing, parsing, and assembling using OCaml and Regex. Created CLI with outputs for lexed, parsed, and assembled states.
- **Open Exchange:** Implemented exchange suite with OCaml and NYSE FIX protocol supporting multiple order types; outperformed gold standard performance by profiling data structure designs with `ocamlprof`. Designed with versatility in mind using failsafe matching engines, cancel fairies, etc.
- **Flux:** Provided a developer friendly API to communicate with TD Ameritrade data provisioner using Go, WebSockets, and a robust state machine. Built highly flexible translation units converting streamed message data into a requester/receiver data model. Achieved 100% tested code coverage.
- **Blueberry:** Exposed CQG data feed providing high-throughput low-latency top-level quote access. Consumed by endusers through various means such as RESTful or GraphQL APIs, or raw TCP/UDP sockets. Optimized for performance, capable of millions of daily message distributions.

SKILLS SUMMARY

Languages: Go, Python, Java, C, C++, OCaml, Rust, SQL, \LaTeX

Tools: Vim, Kubernetes, Docker, CI/CD, Kafka, Nginx, InfluxDB, Prometheus, Grafana

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