Aditya Diwakar

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(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 programatically 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

Georgia Institute of Technology — Atlanta, GA

Undergraduate Researcher — Habanero Extreme Scale Software Lab — *Aug 2022 – Present*

Georgia Institute of Technology — Atlanta, GA

Lead Teaching Assistant — *Jan 2022 – May 2022*

- 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 through 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 SLA obligations by deploying comprehensive monitoring suite
- Provided core business insights to executives by regularly generating itemized server expense reports

Projects

- **OCamLC-3:** Developed assembler for LC-3 assembly with custom lexing, parsing, and assembling. Created CLI with outputs for lexed, parsed, and assembled states. Written in OCaml.
- **Open Exchange:** Implemented exchange in OCaml supporting multiple order types; profiled & optimized data structures with `ocamlprof`. Supported redundant matching engines & cancel fairies.
- **Flux:** Provided developer friendly Go SDK to communicate with TDAmeritrade WebSocket data provider. Built model to convert from subscription data model to requester/receiver model.
- **Blueberry:** Exposed CQG data feed providing low-latency top-level quote access. Consumed over a myriad of platforms. Optimized for performance to provide 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