

# Aditya Diwakar

[aditya.diwakar@gatech.edu](mailto:aditya.diwakar@gatech.edu)

[github.com/adityaxdiwakar](https://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*

- Performed analysis on the cost of manual labor by interviewing operations-burdened engineers
- Reduced SRE toil by engineering an automation framework to deploy resolution workflows with ease
- Reduced developer burden by building various Go SDKs to integrate with infrastructure

### 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 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

Kansas City, KS

*President, Software Engineer*

*Apr 2020 – Jul 2020*

### NetVPX Holdings LLC – 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. Implemented 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,  $\text{\LaTeX}$

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

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