

# Aditya Diwakar

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## 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

### Citadel Securities

Chicago, IL

*Incoming Software Engineering Intern*

May 2023 – Aug 2023

### 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 reliability during outages & monthly releases by leveraging Temporal.io.
- Increased automation workflow visibility by providing Elasticsearch integration by default.

### Loganov Data

Remote

*Founder, 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

### NetVPX Hosting

Remote

*VP, Software Engineer*

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.

## ACADEMIA

### 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 4.98/5 student rating through course management, grading orchestration, and transparency.

## 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 TD Ameritrade WebSocket data provider. Built model to convert from subscription data model to requester/receiver model.

## SKILLS SUMMARY

**Languages:** C++20, Go, OCaml, Rust, C, Python, x86 Assembly, RISC-V, Java, Rust,  $\text{\LaTeX}$   
**Tools:** Linux, Docker, SQL, CI/CD, Prometheus, Grafana, Multicast Networking  
**Infrastructure:** Routing/Switching, Distributed Systems, Matching Engines, Low Latency Development  
**Interests:** Probability Theory, Travel, Espresso, Personal Finance, Gardening