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: *High Performance Computing*, Combinatorial Analysis, Compilers, Operating Systems, Real Analysis, Computer Architecture, Automata Theory,. Machine Learning, Stochastic Processes, Numerical Analysis

Experience

Citadel Securities — Chicago, IL

Low Latency Quantitative Research 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.

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 — Secure Hardware Group — *Jan 2023 – Present*

- Tan Y., **Diwakar A.**, Jagielo J., Mooney V. FPGA Compiler for Register Allocation. *MECO'23.*

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.
- 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 TDAmeritrade WebSocket data provider. Built model to convert from subscription data model to requester/receiver model.

Skills Summary

Languages:	C++20, Go, Rust, C, OCaml, Python, x86 & ARM Assembly, Java, Rust, LaTeX
Tools:	Linux, Docker, Git, CI/CD, Prometheus, Grafana, Profilers, SQL
Infrastructure:	Routing/Switching, Multicast, Distributed Systems, Low Latency
Interests:	Classical Statistics, Travel, Espresso, Personal Finance, Gardening, Swimming