ADITYA DIWAKAR

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science, Double Major in Mathematics and Computer Science   *Aug. 2019 – Dec. 2023*
   Coursework: *Machine Learning, Stochastic Processes, Algorithm: Design & Analysis*, Numerical Analysis,
   Probability & Statistics, Applied Combinatorics, Abstract Algebra

South Forsyth High School   Cumming, GA
High School Diploma
   - Graduated with 4.66/4.0 GPA winning 32 Regional and 2 National Awards for AI Usage in VEX Robotics
   - Won 2 Worlds Titles and 7 1st Place Awards for Events in TSA including "Systems Design" & "Software Design"

EXPERIENCE

Founder, Head of Operations   Jun. 2020 – Jul. 2021
Loganov Data   *Atlanta, GA*
   - Developed rigorous mathematical models to analyze weather data to accurately determine supply/demand volatility
     for Natural Gas on the New York Mercantile Exchange (obtained 92% accuracy)
   - Communicated with vendors such as the National Weather Service and European Centre for Medium-Range Weather
     Forecasts to develop data ingestion pipelines to reduce latency from 20 to 3 minutes for twice daily satellite reports
   - Interpolated anomalized trends for Natural Gas using cyclical mathematical processes
   - Provided reliable data with low-latency to hundreds of end-users utilizing websocket and RESTful/GraphQL APIs

President   Apr. 2020 – July 2020
Code the Universe   *Kansas City, KS*
   - Managed a non-profit organization, with 30 direct reports, to provide learning resources to nearly 2,500 students
   - Developed course registrars (using match-making algorithms) to allow for class registration on a flexible basis
   - Streamlined existing infrastructure to simplify required oversight by management team

VP of Technical Operations   Oct. 2018 – July 2019
NetVPX Hosting LLC   *Boston, MA*
   - Managed client onboarding and technical support operations to ensure sub-hour ticket response times
   - Offered and handled SLA negotiations to provide reliable systems with 99.97% uptime
   - In charge of proof-of-concepts for developing custom hosting provisioning software and additional product SKUs
   - Streamlined protocols to mitigate downtime, yielded consistent resolution of outages within 10 minutes

PROJECTS

Open Exchange | *OCaml, TCP/IP, NYSE FIX, Switching, Profiling, Financial Engineering*   Dec. 2020
   - Developed a fully-fledged exchange/auction system using a classic book approach accessible over TCP sockets
     capable of handling market orders, bids, asks, and cancels using a parallel exchange fairy system
   - Implemented, optimized, and rigorously tested efficient data structures to reduce order matching/execution times to
     faster than the industry gold standard; documented process using benchmarking and a spreadsheet
   - Practiced Jane Street best practices of developing low latency OCaml code, optimized/profiled with `ocamlprof`

Blueberry | *Go, PostgreSQL, Redis, Docker, Websockets, REST API*   Sep. 2019
   - Created a market data provisioner that streamed data from the CQG Futures ticker-tape to provide top-level quote
     data with sub-millisecond latency
   - Logged and automatically analyzed quote and order book data to determine price level supply/demand hotspots
   - Consistently received over one million data requests on a daily basis

Flux | *Go, Websockets, TravisCI, Git, TCP/IP, OAuth2*   Jan. 2020
   - Provided a Golang Library for the TDAmeritrade Data Socket to expose endpoints for developers to retrieve quote,
     chart and option series data on an ad-hoc basis
   - Distributed library binaries with insurance for reliability by integrating fail-safe protocols for client disconnects
   - Used extensively in multiple projects from other developers as a reliable way to get data from financial markets

SKILLS

Languages: OCaml, Go, Python, C/C++, SQL, Rust, Java
Developer Tools: AWS, Git, Docker, TravisCI, CI/CD, Kubernetes, GCP, Vim, Sentry, Nginx, Caddy
Infrastructure: Routing/Switching, Load Balancing, Proxying, Delivery Networks, Matching Engines
Mathematics: Stochastic Modeling, Hypothesis Testing, Numerical Analysis, Brownian Motion, Differential Equations
Finance: Volatility, Options, Futures, Arbitrage, Slippage Backtesting, Binomial Pricing, Commodity Markets