Christopher Linder

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Education

Georgia Institute of Technology Atlanta, GA
Computer Science Major, Math Minor *Graduating December 2026*

- GPA: 4.0
- Current Standing: Senior
- Relevant Coursework: Data Structures and Algorithms, Second Course in Linear Algebra, Intro to AI, Design and Analysis of Algorithms, Computer Organization and Architecture, Computer Systems and Networks
- Concentrations: Theory and Artificial Intelligence

Technical Skills

Languages: C++, C, Python, Java, SQL, MySQL, JavaScript, HTML/CSS, MATLAB
Frameworks: PyTorch, Boost, Django, Kafka, Qiskit, Node.js, Angular, ReactJS, JUnit, pthreads
Developer Tools: Linux, Git, GitHub, Valgrind, GDB, Docker, IntelliJ, NetBeans, NumPy, pandas, TCP/ICP

Experience

Software Engineer Intern Charlotte, NC
Bank of America *June 2025 – August 2025*

- Used Apache Kafka, Spring, and Jenkins to develop Java platform for asynchronous event processing
- Applied saga orchestration and outbox repository patterns for fault-tolerant event processing with rollback support
- Reduced module standup time by 82% through dependency injection hierarchy
- Implemented Kafka database buffering mechanisms to reduce application latency and improve throughput
- Utilized Jenkins CI/CD pipelines to automate builds and deployments

Machine Learning Researcher Atlanta, GA
Georgia Tech Physics Department *January 2025 – Present*

- Training ML models using sparse regression for equation inference on velocity field data
- Utilizing NumPy to analyze pandas DataFrames of high-dimensional system features
- Fine-tuning hyperparameters to predict dynamics properties and reduce equation residuals by 700%
- Using SciPy and Pylians to calculate particle density fields and extract velocity fields with cross-correlation algorithm

Projects

Event-Driven C++ Backtesting Environment | *C++, Quantitative Finance, CMake* GitHub Link

- Implemented low-latency backtesting environment in C++ for validating trading strategies
- Leveraged Boost C++ library and yfinance API to interface with Yahoo Finance historical stock data
- Developed and tested custom mean reversion, genetic algorithm, and ML trading strategies on yfinance datasets
- Achieved 33% higher cumulative returns with genetic algorithm over benchmark returns

Quantum Engineering Framework | *Qiskit, Python, pandas, Monte Carlo Simulation* GitHub Link

- Implemented custom variational quantum circuit in Qiskit for state preparation
- Developed mean-squared error cost function to fine-tune circuit parameters
- Created novel simulated annealing algorithm to optimize classical feedback loop by 75%

Virtual Memory Manager | *C, GDB, memory management*

- Developed virtual memory manager to simulate OS paging
- Developed low-latency routines to handle context switches and page faults
- Implemented FIFO and LRU algorithms with paging deamon, computed AMAT statistics of benchmark programs
- Utilized dynamic memory allocation to load new programs and free evicted pages from simulated memory space

Atlanta Food Finder | *Python, Django, SQLite, JavaScript, HTML/CSS, Agile, DOM*

- Created a full-stack web application using Django integrated with Google Maps API
- Utilized Google Maps API to perform geolocation of restaurants based on SQLite database
- Practiced Agile software development methods and conducted daily scrums