

Christian Dipert

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EDUCATION

The University of Texas at Austin

Bachelors of Science in Computer Science, Mathematics

Expected May 2027

Austin, TX

- Relevant Courses: Data Structures and Algorithms, Object Oriented Programming, Computer Architecture, Operating Systems, Probability & Statistics, Multivariable Calculus

TECHNICAL SKILLS

Languages: Python, Golang, Java, C++, Rust, SQL

Technologies: Kubernetes, gRPC, Docker, RESTful APIs, Apache Kafka, PostgreSQL, RocksDB, AWS, Natural Language Processing (NLP), High Performance Computing (HPC), System Design, Concurrency & Distributed Systems

EXPERIENCE

J.P. Morgan & Chase Co.

Incoming Software Engineering Intern

June 2025 – Aug 2025

Plano, TX

- Summer 2025

Datadog

Software Engineering Intern

Jan 2025 – Present

New York City, NY

- Developed scalable, microservices in Golang handling 10,000+ requests/sec across five datacenters via Kubernetes
- Worked on a Rust-based scanner based on Abstract Syntax Tree (AST) scanning, efficiently enforcing security rules across 56000 repos.
- Introduced concurrency in distributed data ingestion pipelines, improving CPU utilization by 20% and increasing processing speed by ~70%.

TIAA

Software Engineering Intern

May 2024 – Aug 2024

Charlotte, NC

- Automated caching for financial datasets, slashing retrieval times by 86% ($\approx 1,370\text{ms} \rightarrow 190\text{ms}$) and saving ~\$200K in operational costs.
- Replaced monolithic services using Python, reducing backend resource utilization by 40% and cutting response times by 65%.
- Led a cross-functional effort to visualize storage volume queries, lowering critical bug occurrences by 64% through early defect detection.

Lockheed Martin

Software Engineering Intern

Sep 2022 – May 2023

Fort Worth, TX

- Developed a monitoring suite for mission-critical avionics, reducing average processing time by 20% and boosting hardware performance.
- Achieved a 99.8% success rate in low-latency aerospace testing by automating Python and C++ simulation frameworks.
- Collaborated with hardware engineers to implement real-time fault detection, cutting incident response time by 45%.

PERSONAL PROJECTS

Scoreify Real-time Music Recognition | Rust, C++, RocksDB | [Github](#)

- Building a real-time recognition pipeline using FFT and frequency peak matching to identify classical music from a live violin input.
- Implementing a precomputed fingerprinting system in RocksDB, enabling $O(1)$ lookups and narrowing candidate matches progressively.
- Displaying a continuously updating spectrogram in egui, providing instant feedback on frequency analysis and match confidence.
- Introducing a 500ms smoothing window to refine detection accuracy, seamlessly switching track playback upon a stable match.

ML-based ESG Portfolio Parser & Optimizer (*T3Hack 1st Prize*) | Python, NLP, Quantitative Finance, AWS (S3, EC2, Bedrock)

- Investment recommendation engine that analyzes 2,000+ equities & fixed-income securities, incorporating ESG preferences to maximize returns.
- Engineered a Python-based NLP pipeline leveraging AWS Bedrock to parse ESG metrics from financial reports, improving data extraction efficiency by 99.92% (7,200 mins \rightarrow 6 mins).
- Built an interactive UI in Figma to enhance data interpretation, boosting user engagement by 60%.

UT Registration Plus V2 | TypeScript, ReactJS, CSS, ViteJS, Storybook, Semantic Release | [Extension Link](#)

- Created a Chrome extension used by 60,000+ UT Austin students, cutting manual schedule design time by over 85%.
- Adopted Storybook and Semantic Release to streamline development workflows, reducing release cycle times by 40%.
- Planned feature expansions based on user feedback for Fall 2025 registration, targeting a 20% increase in user adoption.

EXTRACURRICULAR

University Securities & Investments Team | Python, Algorithmic Trading, Financial Modeling | [Info](#)

- Attending weekly stock pitches & market pulses, learning about quantitative modeling techniques, and giving/attending stock pitch competitions.
- Competing in annual algorithmic trading competitions on commodities & equity derivatives trading techniques with cohort members.

Texas Symphony Orchestra (Violin) | [Info](#)

- Attending 3 rehearsals/week & performing in 4 concerts/year playing various repertoire in a nationally-recognized collegiat