Chris Turgeon

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Education

Rensselaer Polytechnic Institute **Troy, NY**
B.S. Computer Science, GPA: 3.76 *Aug 2017 – May 2021*

- Rensselaer Medal, Dean's List, Magna Cum Laude, Rensselaer Center for Open Source

Work Experience

Point72 **New York, NY**
Software Engineer – Infrastructure Automation *Oct 2025 – Present*

- Built an AWS-native, event-driven workflow orchestration service on ECS using SQS for event messages and MongoDB for state, designed to be extensible and easy to use, enabling teams to rapidly onboard additional activities and workflows.
- Implemented a self-service server-reboot feature for Linux VMs and bare-metal servers, integrating vCenter, Redfish, LogicMonitor, Ansible, and other infrastructure endpoints to automate server lifecycle operations.
- Developed AppDir, an internal Rust-based inventory management system, adding admin endpoints, building a user-based rate-limiting system using Redis with fixed-window and sliding-window algorithms implemented via Lua scripts, and reducing the unit test suite runtime by 10 minutes, improving maintainability, reliability, and developer productivity.

Amazon Web Services **New York, NY**
Software Engineer – FSx *Sep 2022 – Oct 2025*

- Engineered an on-demand data replication system to transfer multi-terabyte ZFS snapshots between FSx for OpenZFS file systems across AWS Regions and accounts, leveraging ZFS send/receive for efficient, low-overhead transfers.
- Co-developed a high-performance userspace block device in Rust using ublk and io_uring, enabling a scalable managed file system on OpenZFS with persistent S3-backed storage.
- Designed and implemented IPv6 support for FSx for OpenZFS, enabling deployments in IPv6-enabled VPCs. Integrated changes across control plane, data plane, and internal tools, while ensuring compliance with AWS security and networking standards.
- Discovered and escalated a kernel-level bug in Amazon Linux 2023's NFS server stack during customer issue triage; initiated an ongoing kernel team investigation aimed at improving NFS reliability.

Moody's Analytics **New York, NY**
Software Engineer I – Structured Finance *Sep 2021 – Aug 2022*

- Developed an end-to-end pipeline to download and parse over 2 million CSV and PDF financial files using a fleet of Python and C# web crawlers.
- Built a C# WinForms application, enabling financial analysts to review, override, and upload thousands of documents monthly to Amazon S3, improving analyst workflow efficiency.
- Wrote large-scale T-SQL and Spark queries to compute and analyze Collateralized Loan Obligation (CLO) data for internal risk and performance modeling.
- Optimized, debugged, and added features to enhance a financial data streaming web application providing data via API and FTP to customers.

Ellington Management Group **Greenwich, CT**
Software Engineer Intern – Data *May 2020 – Jan 2021*

- Developed over a dozen web scrapers using Python requests, Selenium, and Beautiful Soup to download and parse over 100GB of market data daily.
- Utilized T-SQL to build complex tables, indices, stored procedures, triggers, views, and user-defined functions in order to load, normalize, validate, and provide efficient access to the scraped data.

General Dynamics Mission Systems **Pittsfield, MA**

Software Engineer Intern – Conventional Prompt Strike *Aug 2019 – Dec 2019*

- Developed mission-critical flight software and communication protocols in C++ for a next-generation U.S. Navy hypersonic missile control system. Work conducted under active U.S. security clearance; project details restricted due to NDA.

Projects

Personal Website & Blog

- Modern personal site built with Next.js 16, Tailwind CSS v4, and MDX for content, featuring responsive design, a dynamic blog, and a photography gallery. Utilized TypeScript for type safety and mise to manage development environment consistency across machines. (christurgeon.com)

Lockbox

- Rust CLI tool for secure file encryption and decryption, enabling safe transfer of files over networks. Uses Argon2id for password-based key derivation and ChaCha20-Poly1305 for authenticated encryption, ensuring confidentiality and integrity of data. (Lockbox)
- Designed a custom encrypted file format with versioning, filename preservation, and integrated nonce/salt management, making encrypted files self-contained and easy to share securely.

Tend (usetend.org)

- Built an iOS relationship-maintenance app in Swift/SwiftUI with smart reminders, AI-generated message suggestions, birthday tracking, and a freemium subscription model via StoreKit 2. Developed a companion Next.js marketing site with responsive design and SEO optimization.