Cormac Taylor

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Software engineer with experience across full-stack web and iOS applications. Passionate about building performant, user-focused solutions—from CUDA-accelerated options pricing and traffic simulations to polished iOS consumer apps.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, Groovy, Erlang, OCaml, Swift
Libraries/Frameworks: Pandas, NumPy, React, Material UI, Node.js, Express, Spring, SwiftUI, CUDA
Databases: PostgreSQL, MongoDB, Microsoft SQL Server   **Tools & Platforms:** Git, SPIN, Maven, Jira, Confluence

WORK EXPERIENCE

TD Securities | *Angular, Node.js, TypeScript, Microsoft SQL Server*   New York, NY
Software Engineer   July 2025 - Current
- Delivered admin features extending audit views, enabling full traceability during compliance reviews.
- Simplified manual deployment pipelines by writing PowerShell scripts to automate build and deployment processes. Extended the deployment pipeline with Teams notifications offering status and latest commits.
- Currently building out features to more accurately model coverage bankers' relationship with companies.

Stevens Institute of Technology | *CS 601: Algorithmic Complexity*   Hoboken, NJ
Course Assistant   January 2025 - May 2025
- Assisted instruction for **15 PhD students** in advanced CS theory (automata, Turing machines, time complexity, reductions); supported student learning through 1:1 sessions and detailed algorithmic feedback.

JoStrong (jostrong.com) | *React, Node.js, TypeScript, & MongoDB*   Hoboken, NJ
Lead Developer   August 2024 - May 2025
- Led a **team of 6** in building a full-stack platform for a fitness business, delivering features like client scheduling, a video content library, and digital document workflows using React and Node.js.
- Developed documentation and performance benchmarks that improved team clarity and execution.

TD Securities | *Java & Spring*   New York, NY
Software Engineer Intern   June 2024 - August 2024
- Migrated trade surveillance modules handling millions of trades to Java 17, improving **JVM performance by 6.5%**.
- Refactored legacy pipelines, simplifying maintenance and boosting throughput across high-volume trade datasets.

PROJECTS

Tomorrow (iOS) | *Swift, SwiftUI, Node.js, TypeScript, & PostgreSQL*   June 2025 - Current
- Building an iOS app to simplify personal finance. Features **Firebase Auth** for security and **Plaid** for secure access to users' financial accounts.
- Supports budgeting, net worth tracking, and financial goal-setting in a sleek native interface.

Accelerating Stock Option Pricing | *CUDA C*   May 2025
- Achieved a **15x speedup** in swing-option pricing using Tree Quantization on GPU vs. traditional LSM on CPU.
- Optimized parallel kernels for high-throughput Monte Carlo simulations in CUDA C.

Traffic Light Simulation | *Jupyter Notebooks & Python*   May 2025
- Frustrated with traffic at a local traffic light: modeled it to identify optimal behavior for maximal throughput.
- Applied basic kinematics and weighed simplifying assumptions to balance model accuracy with model complexity

Chat App | *Erlang*   November 2024
- Engineered a **real-time chat app** in Erlang, a highly performant functional language, implementing message-passing protocols and a scalable architecture design to synchronize client, chat room, GUI, and server processes.

EDUCATION

Stevens Institute of Technology | *Highest Honors*   Hoboken, NJ
Computer Science, B.S.   September 2022 - May 2025
- **Coursework:** Data Structures, Machine Learning, Operating Systems, Compilers, Concurrent & Parallel Programming
- **Awards & Honors:** CS Departmental Award, Upsilon Pi Epsilon Honor Society, Edwin A. Stevens Scholarship