

# TOM TWIST

SOFTWARE ENGINEER

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I am a multi-talented, product-obsessed developer who breathes code and loves to ship superb software.

## PROFESSIONAL EXPERIENCE

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**Software Engineer** | Capital One

Aug 2023 - Now

- Developed a cloud-based distributed system for handling real-time foreign exchange rate updates, payments, financial reporting, and data management. Built scalable infrastructure for handling millions of transactions with microsecond latency to allow users to participate in competitive financial markets.
- Building algorithms and maturity dashboards to integrate millions of rows of data from a variety of sources into actionable solutions for reducing operational and financial overhead for the company. Leading development of several new features that ship to thousands of Enterprise users.

**Fullstack Software Engineer** | Luminary Cloud

Jan 2023 - Aug 2023

- Spearheaded new user experiences while creating React-based platform with GCP backend for interfacing with innovative distributed-computing fluid simulation (CFD) simulation software.
- Planned, built and shipped suite for collecting and simultaneously analyzing dozens of simulation outputs via interactive graphs and charts, massively improving user efficiency and overall simulation value.

**Software Engineering Intern** | Capital One

Jun 2022 - Aug 2022

- Built a fully-featured website for recognizing employee contributions using React frontend on serverless AWS-powered backend, utilizing load balancing techniques, NoSQL databases, and custom REST APIs.
- Designed elegant UI and implemented authentication and real-time data updates in MVC architecture.

**Software Engineering Intern** | Greg Brill Startup

May 2020 - Jan 2021

- Worked in a small, agile team to develop novel aeronautical navigation software in C++ utilizing terabytes of geodata to generate realistic 3D Earth imagery.
- Implemented and trained module to process and interpret natural language user commands in real time.

## PROJECTS

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**Ejovese** | C#, Swift, AWS

Releasing 2025

*Tengin Entertainment LLC*

[Project Link](#)

- Working on a unique social video game for mobile devices that features a custom-designed touch control system, UI, social features including a social media feed, and process for algorithmically allocating space on a real-world map for in-game events.
- Wrote bespoke scalable cloud architecture on AWS using NoSQL databases, lambda functions, and custom APIs for generating multiplayer server instances for potentially hundreds of thousands of players.

**Tengin Music Engine** | C++, .NET, Python, Tensorflow

Sep 2022

*Tengin Entertainment LLC (self-owned)*

[Project Link](#)

- Made a rhythm video game built upon self-trained AI-powered audio engine that analyzes user-provided sound files and generates a corresponding interactive audio-visual experience.
- Researched multiple networking topologies and implemented custom peer-to-peer multiplayer and VR mode.
- Shipped game in early access on Steam to thousands of customers and positive reviews.

## TECHNICAL SKILLS

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**Programming**

C, C++, TypeScript, React, Python, Java, SQL, C#

**Infrastructure**

SQL/NoSQL Databases, Jenkins, serverless architecture, API-first design

**Certifications**

AWS Solutions Architect Certified, CSSE Secure Coding Certified

**Tools**

Git, GitHub, Visual Studio, VSCode, IntelliJ, Figma, Unreal Engine 5, Unity, Blender

## EDUCATION

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**University of California, Berkeley**

Aug 2018 - Dec 2022

B.A. Computer Science, Minor Creative Writing

GPA: 3.67

- Coursework including data structures, parallelism, databases, statistics, machine learning, web design, internet architecture, security, operating systems, microelectronics, circuits, and discrete and abstract math.