# Jeffrey Tao

Senior full-stack developer interested in systems, the web, and how computers can empower human ingenuity.
Currently a MSCS student seeking opportunities to participate in CS research.

 GitHub — Speculative
 Website — jefftao.com
 LinkedIn — jeffreytao

Skills

Programming Languages

TypeScript
JavaScript
C#
Python
Java

Tools & Frameworks

React
MobX
Redux
Node.js
ASP.NET & .NET Core
Bazel

Education

Columbia University

M.S. in Computer Science
September 2021 - Present

B.S. in Computer Engineering
Minor in East Asian Studies
Graduated May 2016
GPA - 3.55

Coursework

Computer Architecture
Operating Systems
Programming Languages & Translators
Computer Networks
Embedded Systems
Malware Reverse Engineering
Security Architecture & Engineering

Interests

Distributed systems
Programming paradigms
Human-computer interaction
The Web

Experience

MongoDB – Cloud Alerts Platform

Senior Software Engineer
August 2020 - August 2021

Stand-Alone Service Proof of Concept

Java | Spring | gRPC | Bazel

Investigated implementation and integration details for organization's first service outside of legacy monolith. Scoped work, wrote specification, prototyped, and delivered progress reports to stakeholders. Validated new technologies (Spring, gRPC) in existing Bazel-based build environment.

Commit Auto-Verification

Python 3 | Docker | Bazel | git

Lead a developer productivity project to audit source code commits for SOX compliance and automatically backport commits to production. Integrated git-based auditing & backporting logic with 3rd-party APIs via a Dockerized microservice.

Microsoft – Outlook Web

Software Development Engineer II
August 2016 - August 2020

Data Sync Channel

TypeScript | C# | ASP.NET SignalR

Owned the SignalR-based server-pushed data synchronization channel in Outlook Web. Implemented complex client-server state management and provided guidance to peers developing new server-pushed data flows. Drove modernization efforts including multiple account support (backend fan-out), cross-tab connection multiplexing, and embedding in other applications.

Timers Service

TypeScript | C# | Azure Service Bus

Architected and developed a microservice for scheduling network callbacks via Azure Service Bus to enable dependent services to create time-based scenarios. Owned full project lifecycle from system design to production deployment and for onboarding of dependent partner teams.

Unified Notifications Service & UI

TypeScript | C# | React

Architect of modern notification service as a stand-alone microservice with shared React.js-based UI across all Outlook clients and the O365 Web suite. Mentored an intern who proved cross-platform UI code sharing. Negotiated with partner teams to commit to cross-organization unification effort.

Personal Projects

Hodllive: YouTube channel viewership analytics

Python | Vue | ChartJS

Provides interface for analyzing viewership statistics across YouTube channels with multiple modes and dimensions of analysis. Single-page architecture with no backend, with daily data updates via scheduled CI action committing data set to GitHub, acting as a publicly-accessible historical record.

Holocraft: Minecraft live stream & clip timeline

TypeScript | Svelte | Tailwind | Plyr

Aggregates streams from popular live-streaming group and associates archive VODs to fan clips. Provides a configurable browsing interface including an integrated video player for easy viewing.