

Joseph T. Lapp (Joe)

Senior Software Engineer / Technical Writer

Partially or fully remote

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STRONG SKILLS

[Problem Solving](#)

Java/Android
TypeScript/JS/Node.js
Svelte/HTML/CSS
MySQL/PostgreSQL
Specification Writing
Instructional Writing
UML (visual SW design)

LESSER SKILLS

Rust (learning)
Python/Pyright
Flutter/Dart
JavaFX/Kotlin

FORMER SKILLS

XML Standards
COMPUSEC Security
C and C++
Embedded Systems
6502 & 68000 Assembly

SOFT SKILLS

Active Listening
Teaching/Mentoring
Public Speaking

HOBBIES

Butterflying & Spidering
Teaching about Spiders
Writing Nature Stories

ABOUT ME

I'm a broadly experienced developer presently strongest in full stack TypeScript/Svelte/Node.js who would like work doing good for the world. I'm motivated and diligent and love problem solving and technical writing—two activities that I find connected. You'll want me for thoughtful work writing flexible APIs, friendly UI, generic tools, secure systems, performant code, or clear specs and docs.

EXPERIENCE

Open-Source Developer (Jan 2023 – present)

- [Developing in TypeScript](#) with **Kysely**, **SvelteKit**, **Supabase**, **Nx**.

Bioinformatics Tech (May 2021 – Aug 2022; finished grant)

University of Texas at Austin, Biodiversity Collections

- Developed an [online research platform](#) for biological data using **Svelte**, **TypeScript**, HTML/CSS, **Node.js**, and **PostgreSQL**; uses data clustering, linear regression, **chart.js** graphs, and **MapBox**.
- Developed a desktop **Electron JS** app for a Specify6 **MySQL** DB.
- See <https://github.com/ut-entomology> (includes **Python/Pyright**)

Software Engineer / Inventor (2004 – 2021)

Independent Development – Austin, TX

- Developed and **patented** a **Java/Android** multi-threaded [real-time system for eyes-free gesturing on touchscreens](#) using FSMs.
- Wrote **design specs**, **UML**, patents, **Kotlin**, **TypeScript**, **Flutter**.

Software Architect / President (Aug 2015 – Jan 2018)

Instar Earth, LLC (defunct) – Austin, TX

- Developed semantic tagging tech in **JS**, **Node.js**, HTML, SQL.
- **Mentored** my business partner on UML and software design.

Principal Architect (Dec 1997 – Mar 2001)

webMethods (now Software AG) – Fairfax, VA

- Co-invented **XML-RPC** (e.g., Ajax), co-authored **XQL** & B2B Flow.
- Wrote a high-performing parse-on-demand **XML parser in Java**.
- Served as **W3C representative** & technical liaison to Microsoft.

SUPERPOWERS

Elucidating design flaws & limits through spec writing

Writing robust/efficient/high-performance code

Vulnerability analysis of source code (any amount)

AWARDS

“Capstone Excellence Award” for my BSCS capstone at WGU

EDUCATION

Western Governors University – Texas
2020 – 2022

B.S., Computer Science

University of Maryland College Park
1988 – 1990
Mathematics Major

CERTIFICATIONS

ITIL 4 Foundation
GR671323436JL

[CompTIA Project+](#)

Engineering Consultant (Jan 1994 – Mar 1997)

Pulse, Inc. – Beltsville, MD

- Developed **embedded communications** protocols in **C** and **C++**.
- **Hacked Novell NetWare** from source code to reverse engineer security policies and **discover/prove security vulnerabilities**.

VOLUNTEER WORK

Spider Taxonomist / Nature Educator (2004 – present)

- I teach adults and children about spiders, lead spider walks, and ID spiders for a variety of organizations. [SpiderJoe.com](#)

Crisis Hotline Counselor (UMD Help Center, 1993 – 1995)

- I trained to be a hotline counselor, learned active listening skills, took calls on shifts, and assisted with training new counselors.

SAMPLE PUBLICATIONS

- [Sharing TypeScript with Nx and TurboRepo \(Parts 1–4\)](#)
July 24, 2023 – JavaScript in Plain English
- [Electron RPC Using the Magic of TypeScript](#)
Apr 18, 2022 – JavaScript in Plain English
- [Understanding Provider in Diagrams \(Parts 1–3\)](#)
Oct 2, 2019 – Flutter Community on Medium.com

PATENTS (5 total)

- Finger-Mapped Character Entry Systems – Divisions 1 & 2
Sep 25, 2018–[US 10082950 B2](#); Aug 10, 2021–[US 11086502 B2](#)
- Integration Server Supporting Multiple Receiving Channels
Feb 11, 2014–[US 8650320 B1](#)
- XML Remote Procedure Call (XML-RPC) – Divisions 1 & 2
Apr 11, 2006–[US 7028312 B1](#); Aug 25, 2015–[US 11002089](#)

RECENT PROJECTS

- TypeScript/JSON Schema – Safe/compiling JSON validators using TypeBox. <https://github.com/jtlapp/typebox-validators>
- TypeScript/Node.js/PostgreSQL – A platform for conducting research on Texas cave invertebrates using classical machine learning to make predictions. <https://caves.tacc.utexas.edu>
- TypeScript/Electron – A library for issuing IPC calls as RPC in Electron. <https://github.com/jtlapp/electron-affinity>