

STEFAN TRKLJA COUNTRYMAN

Software Engineer with a passion for complex problems, performance, and developer/user experience

📍 NYC 📞 +1 (301) 312-3935 📧 stefan.countryman@gmail.com 🌐 linkedin.com/in/stefancountryman 🐙 github.com/stefoc 🔗 stc.sh

EXPERIENCE

Medallion (1 year, 6 months)

Software Engineer II

📅 Oct 2022 – Nov 2023 📍 Remote

Full-stack developer on fast-growing, Sequoia-backed healthcare admin app focused on licensure automation and core platform features.

- Collaborated across teams, product managers, and operations specialists to improve and maintain a React/Django web app used by both internal and external users.
- Championed/implemented org-wide feature flag system, improving dev experience.
 - Empowered PMs/devs with user targeting for granular development/releases.
 - Encouraged use on all major projects, with average PM/dev making 3 changes/week.
- Promptly identified and resolved major email delivery bug with largest customer.
- Created audit history system tracking 100% of edits to healthcare providers' profiles.
 - Used >2000 times daily by 40% of customer admins with fast (~100ms) load times.
- Advocated changing synthetic test platform, dropping deployment times 30%.
 - Reduced smoke test flakiness by 50%, reducing dev time and regressions.
- Wrote documentation and paired extensively to share technical expertise.
- Led weekly eng-wide knowledge transfer sessions accelerating best-practice adoption.

Software Engineer I

📅 Jun 2022 – Oct 2022 📍 Remote

New-grad full-stack dev working on automating licensure for healthcare providers.

- Resolved major category of data-breaches by validating user uploads.
 - Eliminated 38% of data-entry related client escalations from previous quarter.
- Created `ecsheel`, an AWS infra management tool used by all (40+) developers.
 - Accelerated accessing app instances, saving ~7 dev hours/day total.
- Worked closely with product and engineering managers to implement client and infrastructure needs.

Columbia University (8 years, 9 months)

Graduate Researcher/Software Developer

📅 Sep 2014 – May 2023 📍 New York, NY

Developed software and computational methods for analyzing data from multiple observatories to better understand black holes, neutron stars, and their environments.

- Invented and submitted provisional patent for novel hash table data structure.
- Created first-of-kind sparse multi-resolution spherical image library (`hpmoc`).
 - Achieved 10,000x reduction in compute times and simulation costs.
 - Designed simple, scientist-friendly interface for plotting and analysis.
- Launched first live search for neutrinos from gravitational wave sources (`llama`).
 - Developed low-latency, high-uptime, cloud-based software pipeline relied on as critical infrastructure by 80+ observatories and thousands of scientists.
- Trained/mentored undergraduates and did science outreach volunteering.

West End Coaching and skilld.co (1 year, 6 months)

Founder/CEO

📅 Mid 2013 – Late 2014 📍 New York, NY

- Founded/operated highly-profitable tutoring company *West End Coaching*.
- Founded on-demand marketplace `skilld.co` and built MVP web app.

TECHNICAL SKILLS

Python C JavaScript Rust SQL S3
Web development AWS Git Docker
Kubernetes React Numerical Methods
Object-oriented Programming Pandas
Bash UNIX Julia Technical Writing

EDUCATION

Columbia University

Ph.D. in Physics

📅 September 2014 – May 2023

M.Sc. and M.Phil. in Physics

📅 September 2014 – May 2017

B.Sc. in Applied Mathematics

📅 September 2009 – October 2013

HONORS & AWARDS

🏆 Special Breakthrough Prize in Fundamental Physics

For LIGO's Nobel-prize-winning gravitational wave discovery

🏆 Gruber Cosmology Prize

Also for GW150914

OPEN SOURCE

ipycytoscape </> graph plotting library

Exposed client-side events on backend, enabling rich interactivity for GUI apps

fitstream </> scientific image library

Writing a streaming FITS image library in Rust for HPC, embedded (e.g. satellite), and serverless environments

PUBLICATIONS

📖 Ph.D. Dissertation

- Countryman, Stefan (2023). *Computational Methods in Multi-Messenger Astrophysics using Gravitational Waves and High-Energy Neutrinos*. en. DOI: 10.7916/c8n9-p112.