

Jesse M. Porch

Software Systems Architect

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Profile

Software engineer with 15 years of experience spanning software development, interdisciplinary research, and editorial collaboration. Helps teams **understand established systems** and **plan practical changes** around complex organizational constraints. Combines hands-on engineering experience with careful investigation and close collaboration with the people who use and maintain systems.

Professional Focus

- **System assessment:** Map behavior, data flows, dependencies, and stakeholder needs; identify gaps between documented assumptions and actual operation.
- **Architecture and modernization:** Develop practical designs, migration strategies, and targeted proofs of concept for changes within established environments.
- **Engineering workflow improvement:** Assess tooling and release processes to reduce manual work, prevent errors, and make routine changes easier to execute.
- **Technical communication:** Translate findings into design documents, implementation plans, and clear explanations that support shared decisions.

Professional Experience

SimpliSafe — Core Platform, User Systems

Senior Software Engineer · January 2021–April 2026

- **Led the redesign of Preactivations**, a business-critical service that allowed customers to supply setup information before their security systems arrived. Authored architecture documents, implementation tickets, and the release plan; reviewed and tested contributions from junior developers and contractors.
- **Designed a just-in-time migration strategy** that minimized cutover requirements for dependent teams and avoided a bulk migration of in-flight orders while preserving rollback capability.
- **Partnered with a Staff Engineer** and integration stakeholders to verify legacy behavior through code walkthroughs. Redesigned the object model around business needs and reimplemented orchestration logic to eliminate identified unrecoverable error paths.
- **Identified shortcomings in existing metrics** that would have prevented reliable post-launch validation. Standardized definitions and managed instrumentation of the legacy system to establish a baseline; the resulting launch showed no perceptible decline in preactivation throughput and did not require rollback.
- **Developed a reusable Rust template** for lightweight message-processing services, providing the foundation for approximately six deployed services.
- **Carried out core-service migration** from axum 0.7 to 0.8, addressing breaking routing changes across internal tooling in collaboration with the responsible Distinguished Engineer.

Harvard Law School — IT Department, Business Solutions

Application Developer (Full Stack) · August 2016–December 2020

- **Researched, designed, and implemented** a configurable Amazon Glacier archival tool for the Media Services library. Its flexible design supported adoption for additional archival projects.
- **Implemented the Faculty Bibliography frontend** from architectural wireframes, working with the architect responsible for its Elasticsearch-backed publication search.
- **Helped establish business-hours website releases** by reassessing deployment risks and presenting the proposed change to IT leadership and Communications stakeholders.
- **Served as Scrum Master for coordinated upgrades** to the student information system, database engine, and underlying virtual machine alongside frontend updates. Worked with Communications and Infrastructure stakeholders to plan go-live timing and validation procedures; the team delivered the updates in a single deployment.

InterSystems — Application Services

Application Developer (Full Stack) · June 2011–May 2015

- **Developed and maintained Change Control** Record (CCR), an internal application implementing branching, deployment, and change-documentation workflows around Perforce.
- **Served as an early contributor** to the system, implementing workflow changes and resolving defects in response to internal-user feedback as adoption expanded to development for external clients.
- **Defined and published shared libraries** and development practices as part of Application Services, the company's center of excellence for internal development, providing reusable foundations for teams across the organization.
- **Supported broader adoption of the** team's development workflow through documentation and training.
- **Mentored five interns, helping them** break down tasks, implement changes, and guide their work through deployment.

Additional Experience

Haywire

Columnist, Editor, and Technical Adviser

Writing and editing: 2016–2017, with subsequent intermittent contributions

Technical stewardship: 2021–present

- **Edited contributed writing from pitch** toward publication, with particular attention to line editing that improved clarity while preserving each writer's voice and intent.
- **Assumed hosting and maintenance responsibility** for the publication's WordPress site as its existing hosting arrangement became insufficient for ongoing platform needs.
- **Designed and implemented a Codex-assisted transition** from WordPress to static hosting to reduce maintenance demands and mitigate pressing security concerns.

Trinity Fellows Academy

Research Fellow · August 2015–May 2016

- **Conducted independent research and authored** a thesis and supplemental essays during an interdisciplinary fellowship focused on leadership and engagement with contemporary issues.
- **Coordinated a team of 12 Fellows** for two major external events: Recruiting Weekend and Alumni Visitation.
- **Scheduled weekly duty shifts** to balance Fellows' individual availability against the group's commitment to service in the associated retreat center.

Grove City College — Sweezy Research Fellowship

Research Fellow · May–July 2009

- **Developed an integer ray-tracing pipeline** and supporting research tools in C++ and Assembly for specialized hardware.
- **Co-authored the peer-reviewed paper** [Integer Ray Tracing](#), published in the *Journal of Graphics, GPU, and Game Tools*, and the research poster [Toward Stream Filtered Ray Tracing on a DSP](#).

Education

Bachelor of Science in Computer Science

Grove City College · Class of 2011

Selected Technical Background

Rust, Node.js, Codex, TypeScript, C#, Caché ObjectScript