Jeffrey Pohlmeyer, PhD

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SUMMARY

Engineering lead with 8+ years building and owning production web platforms end to end, preceded by four years in actuarial pricing and independent quantitative model validation. PhD in Applied Mathematics. Hands-on with LLM coding agents in production delivery at scale: orchestrating concurrent agents across parallel worktrees and building automated tooling that audits a codebase against defined engineering standards. Track record spans regulated financial services, model validation and governance, API and integration design, and technical leadership exercised through architecture ownership and review authority rather than reporting lines. Experienced owning the product side as well: working directly with stakeholders and users to define what gets built, on teams without a dedicated product or design function.

CORE SKILLS

Languages & Frameworks: TypeScript, JavaScript, Python, SQL; Svelte/SvelteKit, Vue 3, React, Node.js, Fastify, Django, Django REST Framework, FastAPI

Data & Infrastructure: PostgreSQL, Docker, AWS, GraphQL, REST API design, GitHub Actions, CI/CD, feature-flagged release, Alembic/SQLModel migrations

AI-Assisted Delivery: LLM coding agents (Claude Code), concurrent multi-agent orchestration, parallel worktree workflows, automated standards auditing, neural networks and deep learning coursework

Quality & Governance: Vitest, Cypress, code review gating, engineering standards definition and enforcement, independent model validation, challenger model construction

PROFESSIONAL EXPERIENCE

Staff Engineer, Front-End Lead, Cassi (Remote) / *September 2025 – October 2026*

- Owned the entirety of a customer-facing web platform built in SvelteKit, including architecture, delivery, and quality standards.
- Served as the sole developer on the platform through its first five months, establishing the front-end architecture, coding standards, and engineering conventions that remained in use.
- Handled product and design work for the platform before product and design hires joined; afterward contributed to design discussions, with some suggestions adopted by the design team.
- Designed the client–server boundary between SvelteKit server routes and a separately deployed Fastify backend service, defining the integration contract between the two systems.
- Acted as required reviewer on every client-side pull request, maintaining a single consistent quality gate across all platform work.
- Built automated auditing tooling that evaluates the codebase against defined coding standards and architectural rules, converting review knowledge into repeatable, scalable enforcement.
- Used LLM coding agents (primarily Claude Code) extensively in production delivery, running multiple concurrent agents across separate Git worktrees and integrating the resulting work into a coherent codebase.
- Mentored a second front-end engineer through technical direction, architectural guidance, and code review, without formal reporting lines.

Staff Software Engineer, arqu (Remote) / *June 2022 – September 2025*

- Sole front-end developer for three years, leading architecture and development of a mission-critical internal Vue 3 platform.
- With no product or design team, owned the full product cycle for the platform: met with stakeholders to understand their workflows, turned loosely defined needs into requirements, designed the interface, and built it.
- Led a full architectural refactor of a backend-centric codebase into a modular, maintainable front-end using TypeScript, Pinia, ES modules, and idiomatic Vue.
- Phased out Vuetify in favor of headless UI principles, implementing shadcn-vue for accessible, maintainable component design.
- Designed front-end architecture for scalable deployment via GitHub Actions CI/CD, with standards enforced through ESLint and Prettier.
- Built test coverage using Vitest and Cypress, integrated with cloud-hosted environments and feature-flagged rollouts.

Senior Software Engineer (Backend), Urbint (Remote) / *October 2021 – June 2022*

- Built backend services using FastAPI, PostgreSQL, Docker, and GraphQL in a high-stakes pre-release environment.
- Developed CI/CD workflow in CodeFresh to automate PostgreSQL migrations using SQLModel and Alembic.
- Built a CLI tool to streamline debugging of complex risk metric calculations.
- Supported the UI team through well-documented APIs and containerized development tooling.

Associate Director, Lead Full Stack Web Developer, A.M. Best (Oldwick, NJ) | *November 2017 – September 2021*

- Led architecture and implementation of a full-stack web platform that replaced legacy Excel-based actuarial models used across multiple business units at a global credit rating agency.
- Managed a small engineering team, directly supervising two developers and owning code review, technical planning, and mentorship.
- Built a single-page application in Vue 2 with Vuex, Vuetify, and reusable component patterns supporting complex actuarial workflows.
- Developed backend services in Django and Django REST Framework, integrating legacy systems and an internal JWT-based authentication layer.
- Engineered exportable reporting tooling using Jinja2, Parcel, and Chart.js to produce standalone, print-ready summaries for regulatory and internal use.

Senior Actuarial Consultant, MetLife, Inc. (Bridgewater, NJ) | *January 2016 – November 2017*

- Performed independent validation of quantitative models used for credit default swap valuation (Numerix), reverse stress testing, and Kamakura Risk Manager, under formal model risk governance standards.
- Constructed independent challenger models and SQL-based data comparisons to test production pricing model output across multiple asset classes.

Actuarial Assistant, New York Life Insurance Company (New York, NY) | *December 2013 – January 2016*

- Performed group pricing analysis and model conversions to the Prophet actuarial system.
- Contributed to product development for Critical Illness and Chronic Care riders.

INDEPENDENT PRODUCTS

Co-owner and Sole Developer, Continuing Education Keepers, LLC | *May 2025 – Present*

- Designed and built CE Keepers (cekeepers.com), a full-stack SvelteKit product for mental health professionals to track continuing education across multiple state licenses: multi-license dashboard, CE hour calculation by category, renewal reminders, certificate storage on S3, and individual and per-seat group plans.

Weight Points Plus (weightpointsplus.com) | *Personal project, sole developer*

- Designed, built, and operate a live Django food-tracking application with PostgreSQL, email-verified accounts, and a points-calculation engine; containerized with Docker and deployed on Coolify.

EDUCATION

Ph.D., Applied Mathematics: New Jersey Institute of Technology, Newark, NJ (2008–2012)

Visiting Student, OCCAM: University of Oxford (2012)

M.S., Mathematics: Montclair State University (2006–2008)

B.S., Mathematics and French (Double Major): Loyola College in Maryland (2000–2004)

CREDENTIALS & CERTIFICATIONS

Associate, Society of Actuaries: 2016–2023 | SOA Exam QFI Core passed, May 2016

Coursera: Neural Networks and Deep Learning (2022); Improving Deep Neural Networks (2022); Machine Learning, Stanford (2016)

QuantNet / Baruch: C++ Programming for Financial Engineering (2016)

SELECTED PUBLICATIONS

Cyclic loading of growing tissue in a bioreactor: mathematical model and asymptotic analysis. Bulletin of Mathematical Biology, 2013.

Mathematical model of growth factor driven haptotaxis and proliferation. Bulletin of Mathematical Biology, 2013.

Modeling cell proliferation in a perfusion tissue engineering bioreactor. Doctoral dissertation, 2013.

Non-normal pulsation. EAS Publications Series, 2009.