Kyle Pfister

847-454-4337

kpfister44@gmail.com

Profiles

kpfister44

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Technologies/Skills

React	Svelte
Node.JS	Git
GitLab	Frontend
Backend	REST
ASP.Net	.NET Core
SvelteKit	MongoDB
Vitest	SQLite
jQuerry	Vite
Vercel	Railway
FastAPI	Tailwind
TanStack Query	pytest
SQLAlchemy	AI/LLM APIs
Playwright	

Languages

Javascript	Typescript
C#	Python
SQL	MSSQL
C	Java
Swift	SwiftUI

Education

Oregon State University — **6/21/22 - 12/14/25**
3.71 — B.S. Computer Science

Wheaton College — **1/20/19 - 5/25/22**
3.60 — M.A. Biblical Studies

Illinois Wesleyan University — **8/14/10 - 12/18/14**
3.23 — B.A. History and Secondary Education

Experience

Argonne National Laboratory — **August 2023 - February 2025**
Full-Stack Web Developer - 10-15 hours/week — Lemont, IL

- Assisted in integrating the frontend with a newly architected backend built on C# and MSSQL, transforming an existing Microsoft Excel tool into a comprehensive, web based solution.
- Ported a legacy web application from jQuery to Svelte, optimizing API calls and refactoring the data flow from a class-based to a functional, store-based architecture. Converted legacy JavaScript code to TypeScript, enhancing type safety and reducing runtime errors, while improving maintainability and scalability.
- Developed and implemented comprehensive unit tests using Vitest, implementing proper test coverage and enhancing the reliability of the codebase.
- Authored detailed documentation to assist new interns in setting up their development environments, with specific guidelines for Mac users to streamline onboarding and reduce setup time.
- Collaborated with a team of three developers to build a dynamic frontend using Svelte and TypeScript for a web application aimed at calculating energy and demand costs for electric vehicle fleets.

Elk Grove High School — **August 2017 - Present**
Computer Science Teacher — Elk Grove Village, IL

- Currently teach Intro to Programming and AP Computer Science A (2025-Present), developing comprehensive curriculum leveraging Java and Swift/SwiftUI for hands-on mobile and desktop development.
- Created AI-powered auto-grading system in Java for Swift programming assignments, reducing grading time by 70% while providing detailed, consistent student feedback (see MobileMakersGrader project).
- Mentor students in computer science fundamentals, object-oriented programming, and software development best practices.
- Led the Professional Learning Community (PLC) for U.S. History, coordinating cross-team collaboration to improve teaching strategies and curriculum design.
- Previously taught AP Psychology, AP U.S. History, and American Law (2017-2025), demonstrating versatility and commitment to student success.

Argonne National Laboratory — **June 2023 - August 2023**
Full-stack Developer Intern — Lemont, IL

- Managed and implemented continuous integration, code review processes, and git deployment workflows within the team.
- Collaborated with the AFLEET team to develop the AFLEET website for Clean Cities Coalition stakeholders, contributing to both front-end and back-end development.
- Cleaned up and optimized TypeScript functions, improving code readability, maintainability, and overall performance of the website.
- Enhanced user interactivity in a Svelte-based web application by integrating dynamic Chart.js features, allowing for more responsive and engaging data visualizations.
- Organized and optimized CSS within Svelte components, and implemented UX improvements such as info tip buttons and a help button to guide users, significantly improving the user experience.

References

Andrew Burnham
Manager

Principal Environmental Scientist
aburnham@anl.gov

Noah Song
Lead Developer

Web Developer
nsong@anl.gov

Tim Phillips
Department Head

Social Studies Department Head
tophillips@live.com

Projects

Illinois School Explorer **November 2025**
Python, FastAPI, React, Typescript, SQLite
https://illinois-school-explorer.vercel.app/

- Developed and deployed full-stack web application enabling search and comparison of 3,827 Illinois K-12 schools using official 2025 Report Card data from the Illinois State Board of Education.
- Engineered React + TypeScript frontend with TanStack Query, shadcn/ui, and Tailwind CSS; built FastAPI backend with SQLAlchemy 2.0 and SQLite FTS5 full-text search.
- Implemented comprehensive testing suite with 90%+ coverage using pytest (13 test files), Vitest (23 unit tests), and Playwright (6 E2E tests).
- Deployed to production on Vercel (frontend) and Railway (backend) with automated CI/CD pipeline from GitHub.

MobileMakersGrader **October 2025**
Java, AI/LLM APIs
https://github.com/kpfister44/MobileMakersGrader

- Built AI-powered auto-grading system for high school Swift programming assignments, integrating Claude API for intelligent code analysis and feedback generation.
- Automated evaluation of code quality, correctness, and adherence to assignment requirements, reducing manual grading time by 70% while maintaining consistent, detailed feedback.
- Designed modular architecture supporting customizable grading rubrics and prompt engineering for different assignment types.

ATRAVEL Trip and Metric Tool **June 2023 - February 2025**
Svelte, Typescript, C#, ASP.NET
https://afleet.es.anl.gov/atravel/

- Fully ported the ATRAVEL Trip and Metric tool from jQuery to Svelte, improving performance, maintainability, and scalability.
- Streamlined data handling, reduced DOM manipulation overhead, and enhanced the user experience by leveraging Svelte's reactive framework, resulting in faster load times and more responsive UI.
- The tool helps users compare travel and ownership costs between private vehicles and other modes of transport, including transit, rideshare, carshare, and bicycles.

Kinnect - Private Family Photo Sharing **September 2025**
Swift, SwiftUI, Supabase
https://github.com/kpfister44/Kinnect

- Developed Instagram-style iOS application for private photo sharing among family and close friends, emphasizing privacy and intimate social connections.
- Implemented core iOS features including photo capture/upload, feed display, user authentication, and real-time updates using SwiftUI and modern iOS development patterns.

APUSH-Grader **July 2025**
Python, FastAPI, React, TypeScript
https://github.com/kpfister44/APUSH-Grader

- Developed production-deployed AI essay grading system for AP US History with React/TypeScript frontend and FastAPI backend, featuring ChatGPT-style interface for grading DBQ, LEQ, and SAQ essays using Anthropic Claude Sonnet 4.
- Implemented 320+ comprehensive tests, rate limiting (20 req/min), authentication system, and cost management safeguards with daily limits to prevent excessive API usage.
- Integrated Claude Vision API for DBQ document uploads (charts, graphs, political cartoons) with prompt caching achieving 90% cost reduction for batch grading.