

JOHN PEARSON, Ph.D.

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OVERVIEW

Senior software engineer shipping production AI and DeFi systems at scale. Currently consulting across three AI products at Playground: Pegasus (multi-agent marketing reporting), the 9M-user image platform, and Alice (SMS-based AI assistant). Previously sole owner of a 4-product DeFi portfolio (80K peak DAU, \$70B+ volume, 6 chains, 12 repos, 4,226 commits). Full-stack generalist comfortable across frontend, backend, infra, and AI integration. CTO: "The kind of engineer you build a company around." Ph.D. Mathematics. Built a Claude Code agent swarm (100+ subagents) for engineering throughput.

EXPERIENCE

Senior Software Engineer (Contract)

Mar 2026 – Present

Playground.ai (Pegasus + Image Platform + Alice)

Remote

- Pegasus (production runtime agent swarm for marketing reporting): built a 7-layer architecture harness (Context, Harness, Handoff, Verification, Cost, Orchestration, Learning) on AG-UI for streaming agent events and A2UI for generative UI surfaces. Orchestrator plus sub-agents fill weekly performance templates from Meta Ads and Google Ads data with audit-trail provenance and journal-based wire assertions
- Playground (9M-user AI image generation platform): shipped new image tools, hardened payments lifecycle, contributed to core product reliability
- Alice (SMS-based AI assistant with persistent memory, voice, and tool use): led production-readiness overhaul (Cloud Run, BullMQ, pgvector), built multimodal messaging (images, voice memos, TTS), waitlist/upgrade flow, eval framework, and CI pipeline
- Cross-product infrastructure: unblocked production deploys by fixing Docker builds, Cloud Build secrets, and PGBouncer auth across all three products

Senior Software Engineer

Feb 2022 – May 2026

Nexus Labs (Maverick Protocol)

Remote

- Primary engineer for Maverick Protocol (DeFi AMM) and 3 additional products. 80K peak DAU, ~3M users, \$70B+ cumulative volume, 6 chains, 12 repos, 121 production releases, 4,226 commits

- Sole owner of V2 stack: 98% of API and 73% of frontend by code volume. CTO: "He effectively owned the entire stack."
- Built V1 API from scratch under live production traffic as app grew from 500 to 22K DAU. Ran dual-track V1-to-V2 migration without downtime while V1 served 15K+ DAU
- Built 49 Datadog dashboards (cron health, swap analytics, pricing data, RUM). Served external API consumers including CoinGecko, EtherFi, and Dune Analytics
- Hardened Ponder indexer: 4x speedup, crash loop fixes, memory leak patches. Consolidated multi-repo codebase (585 commits)
- Built 3 additional DeFi products: ve(3,3) voting/incentives platform, ERC-4626 vault protocol with cross-chain support, and an AMM frontend (sole author, 18 days)
- Built a Claude Code agent swarm (100+ subagents) for engineering throughput and architecture enforcement

Head Masters Women's Coach

Sep 2012 – Present

Atlanta Rowing Club

Atlanta, GA

Coach a team of 20–25 adult women • #1 club nationally (2025) • 15+ National Championships (2021–present)

Founder

June 2015 – Aug 2023

Illuminotes LLC (illuminot.es)

Atlanta, GA

Founded an LLC and built an interactive EdTech platform providing structured digital study notes for physics courses • React, Redux, Firebase (Auth, Realtime DB, Hosting, Cloud Functions), KaTeX/MathJax for LaTeX rendering, markdown content pipeline • Udemy course with 250+ students and active revenue

Science Dept. Chair & Upper School CS, Math, & Physics Teacher

Aug 2008 – June 2023

Pace Academy

Atlanta, GA

Managed a department of 10 • Taught AP and Honors classes at every grade level • Built a multi-year statistical analysis in R of ~3M data points across 100K+ student records, with interactive Shiny dashboards, presented to administration to improve equity and decision-making

EDUCATION

Ph.D. in Mathematics, Minor in Physics

July 2008

Georgia Institute of Technology

Atlanta, GA

Thesis: The Noncommutative Geometry of Ultrametric Cantor Sets

B.A. in Mathematics

May 2002

Dartmouth College

Hanover, NH

HONORS & AWARDS

Best Ph.D. Thesis Award, Georgia Institute of Technology (2009) • 5 teaching fellowships including the Loridans Academic Fellowship (5-year) and Crawford Endowment for Excellence (3-year)

PUBLICATIONS

Published in the **American Mathematical Monthly** (2018) and the **Journal of Noncommutative Geometry** (2009). Ph.D. Thesis: "The Noncommutative Geometry of Ultrametric Cantor Sets" (Georgia Tech, 2008).

LANGUAGES & TECHNOLOGIES

Frontend:

React

TypeScript

Next.js

Vite

JavaScript

HTML/CSS

React Query

MUI

Backend & Infra:

Node.js

tRPC

Hono

PostgreSQL

Redis

Stripe

Datadog

AWS

Cloud Run

Vercel

Web3:

Wagmi

Viem

Ethers.js

Ponder

AI & Tooling:

Claude Code

Multi-Agent Orchestration

MCP Servers

fal.ai

Familiarity:

Solidity

R

French