David M. Noll

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Technology Skills

Front End: **TypeScript**, **React**, Vue, Redux, Prisma, Jest, Cypress
Back End: **Python**, Node.js, Django, Flask, PHP; Some **Scala**, Haskell, Java, Rust
AI: LLM Integrations, **Clustering with Embeddings**, prototyped semantic search
DevOps: AWS, Azure, Docker, SQL, Linux; Some Terraform, Kubernetes, AWS CDK, Ansible

Software Developer with 10+ years full stack & infrastructure experience. Recent work also includes prototyping and exploring AI applications. Background in cognitive science with focus in cognitive linguistics.

Open Source

ChkFlow: a React component editor/view for tree data inspired by Workflowy's interface.
Netcode: experimental neuron-wise neural net for exploring backpropagation and node-level visualization.
Pixel Time: a web3 dApp that allows users to collaboratively edit an image.
GLTrader: desktop app for real-time monitoring of cryptocurrency market data via Bittrex API.

Experience

DevOps Engineer, *Stottler Henke Associates Inc.* 2025

AI & Applications
- Contributed to funded feasibility research proposal on recursive decomposition with LLM's and static analysis for automated refactoring and containerization.
- Prototyped local log analysis tool for LLM analysis of logs using Llama (7B) to flag anomalies. Surfaced a hardware failure that had previously been overlooked.
- Research on-premises LLM hardware requirements, created proof of concept of internally hosted LLM for on-prem coding assistant.
- Manage and debug API access to AWS Bedrock.

Compliance, DevOps and infrastructure
- Automated tooling including AWS billing reports, Backstage portal for services with integration with on premises Gitlab installation, and health checks.
- Develop infrastructure as code for On-prem and AWS using CDK and Ansible.
- Research and development & prototyping of compliant on premises Kubernetes installation.
- Research, purchase, and test deployment of package firewall service.
- Manage & assist in compliance audits of internally hosted developer tooling (e.g. GitLab)

Developer, *Fosforescent* 2023-2024

Solo bootstrapped project for a collaborative organization & workflow system
- Designed a graph rewriting system for collaborative human + agent workflow management, combining functional programming concepts with practical task management.
- Implemented system using OpenAI API to recursively generate graph-based workflows.
- Prototyped semantic search with Pinecone and OpenAI embeddings API.
- Created TypeScript & React UI library to allow navigating & drag-and-drop editing of task graph.
- Created multiple iterations of backend including Rust web server running Stripe integration, and Node.js version with content-addressed node storage
- Developed CI/CD pipeline with GitHub Actions, infrastructure as code repository using Terraform, automated Kubernetes deployments using ArgoCD, with cloud databases
- Researched graph rewriting systems, combinator systems, process calculi, and type systems.

Lead Full Stack Engineer, *Dojo.co*   2021-2023
Led 3 other FT devs on ~10 person team doing analysis and visualization of workplace interaction data
- Designed and implemented a CI/CD pipeline in Heroku & GitHubActions and added an entire test suite using Cypress, Pytest, and Jest tests.
- Introduced Docker & Docker Compose local development & testing environment.
- Created & maintained production, testing and dev environments in Heroku, AWS, passing rigorous security review processes.
  Features
- Improved performance and maintainability through multiple phases of refactoring front end and back end, including adding progressive loading to d3 force graph visualization, improving DB schema.
- Increased performance of endpoint from several minutes to under 10 seconds for large projects, increasing feasible project size by 100x+.
- Added AWS Lambda function with AWS Serverless Application Module to handle log drain.
- Designed & implemented concept of groups, group member, node hierarchy.
- Implemented new admin UI to conform to JWT auth requirement of 3rd party pen test.
  Management
- Led remote team of 1 FT engineer as well as 2 regular full time contractors.
- Responsible for validating feature implementation plans, code review, quarterly feedback.

Senior Full Stack Engineer, *Care.Coach*   2018-2021
First full time hire at Telehealth assistant based around remote caregiver-powered animated avatar
- Designed & created Django-based internal service to house updated schema + machine learning models & integrations as well as collected, monitored & analyzed performance metrics and logs for reporting.
- Upgraded video streaming architecture from Flash/RTMP to HTML5/WebRTC by implementing web client, server configuration, guiding implementation of Android mobile client.
- Upgraded security to meet standards of major client 3rd party security audit.
- Integration with hospital EMR & our cloud-hosted SQL Server DB using Java Spring.
  DevOps
- Created & maintained production, testing and dev environments in Azure.
- Completed migration of production & staging infrastructure from dedicated Linux server to Azure with minimal downtime.

Independent Contractor, *David M Noll LLC*, Louisville, KY   2014-2015, 2017-2018
- Created web applications in PHP, JavaScript, AWS EC2, and shared hosting.
- Designed and implemented Python desktop application for cryptocurrency trading.

Interactive Developer, *JUMP by LEAP agency,* Louisville, KY   2015-2016
- Development with WordPress, Laravel, or PHP/HTML, MySQL, JavaScript.

IT Consultant, *Derby City IT*, Louisville, KY   2012-2013

Education

Rensselaer Polytechnic Institute, M.S., Global Enterprise Management   2010
Case Western Reserve University, B.A., Cognitive Science   2008