

NATHANIEL WILLIAM JOHNSON

nate@paintbynate.art

Professional Experience

STORD

Charlotte, NC

Senior Software Engineer

August 2021 - Present

- Worked on 100 day sprint team to create a new warehouse management platform in Elixir + React
- Wrote technical design documents for numerous new features which included Swagger API specs, database diagrams in the form of ERDs, test plans, and a breakdown of tasks into Jira tickets.
- Integrated third party APIs such as auth0, Easy Post, Shipium, and more into our platform to provide a single interface for printing labels and getting rate quotes.
- Implemented numerous features and optimizations on STORD's order management system leveraging various technologies and patterns such as elasticsearch, kafka, PostgreSQL, redis, and elixir's genservers.
- Created a desktop application with Phoenix live view which allowed engineers to manage and run the entire suite of microservices on their local machines. This drastically reduced development time and the frequency of customer-found bugs.
- Helped create and maintain a greenfield application that was used as a public API for our customers which leveraged typescript, hono.js, and cloudflare workers.
- Created terraform and helm configurations for deployment to Google Cloud kubernetes engine.
- Lead several lunch and learns on Elixir and associated libraries like Ecto, Phoenix, and LiveView

Sprout ITAD

Charlotte, NC

Senior Software Engineer

February 2020 - August 2021

- Maintained Elixir Phoenix API with Vue/Vuex frontend and upgraded it to be containerized to run on AWS ECS.
- Created a subscription layer for our vue.js application that allowed Sprout to sell different tiers of subscription with different levels of data for example one business had access to yearly reporting whereas others could only view monthly.
- Integrated partner APIs such as Comcast, WeWork, and Softthinks to automatically update their inventories when our warehouses processed assets (HTTPOison, Xmlbuilder, Sweetxml).
- Integrated Shopify API to be used as a storefront for all of our inventory to boost sales and make our brand stand out from other ITAD providers.
- Optimized numerous SQL queries that had >30 second performance down to under 1 second
- Worked on shared services team using node.js + AWS lambdas for a brief period integrating netsuite before transitioning to Sprout for an elixir position.

Passport

Charlotte, NC

Software Engineer III

October 2019 - February 2020

- Implemented a public API which cross stitched data across multiple serverless microservices using serverless (AWS), typescript, dynamoDB and express.js.
- Architected multiple serverless APIs in the global apps team which handled payments, ticketing, and parking data.
- Mentored Junior QA engineers into junior SDE roles

Red Ventures

Charlotte, NC

Senior Software Engineer

October 2014 - October 2019

- Worked on a distributed team to build/maintain a CI tool for deploying ECS tasks and S3 static sites leveraging Elixir, Phoenix, and absinthe.
- Transformed legacy system to serverless architecture and migrated it into AWS using node.js and various AWS technologies (Terraform, Lambda, AWS Fargate, Codebuild, Codepipeline, CircleCI, and ECS).

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- Managed team of five developers to design and improve react/redux/node.js framework for our agent and cart facing platform.
- Built QA platform used by multiple businesses to run functional tests against thousands of sites leveraging various cloud technologies (SQS, S3, EC2, Lambda) and newer programming languages (Go, Elixir, and node.js).
- Created site leveraging AWS cloudfront, react/redux, and go lang for one of the largest telecommunications companies in America.
- Built multiple ECommerce platforms that allowed for rapid iteration and A/B testing for our partners with node.js and vue.js
- Built survey platform which allows individual businesses to style their own survey templates or use existing templates. Users submitted over 140,000 answers with this platform.

UNC Charlotte
Teaching Assistant

Charlotte, NC
February 2017 - October 2017

Premier, Inc. (ITS)
Associate Developer

Charlotte, NC
July 2014 - October 2014

NC State University ITECS
Student Web Developer

Raleigh, NC
August 2012 - May 2014

Cisco Systems, Inc. (TRIAD)
Software Engineering Intern

RTP, NC
May 2013 - August 2013

Example Work

- **Online Art store:** App that I built to sell my oil paintings (react, remix, supabase, cloudflare)
 - <https://shop.paintbynate.art/>
- **URL Shortener:** demo application for shortening Urls in various programming languages
 - <https://github.com/nathanjohnson320/elixir-url-shortener> (elixir + react)
 - <https://github.com/nathanjohnson320/php-url-shortener> (laravel + livewire)
 - <https://github.com/nathanjohnson320/cf-url-shortener> (turbo + hono.js + cf d1/workers)
 - <https://github.com/nathanjohnson320/python-url-shortener> (python + fastapi + vuejs)
- **Clerk Auth SDK:** elixir package that wraps the clerk.js API
 - https://github.com/nathanjohnson320/clerk_elixir
- **Agora Signing Package:** elixir package that implements agora's token signing for Access Keys
 - <https://github.com/nathanjohnson320/agora>
- **Other open source:** Source code for above projects and all the other projects I've worked on
 - <https://github.com/nathanjohnson320/>

Education

North Carolina State University
Computer Science B.S.

Raleigh, NC
Class of 2014

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Technical skills

Concepts	Agile methodology, Distributed Systems, OTP, Virtualization, Model View Controller, TCP/IP model, white/black box testing, Test Driven Development, and Version Control (git/github, SVN, CVS).
Languages	BASH, C, Elixir, Elm, Erlang, Gleam, Go, Haskell, Imba, Javascript, PHP, Python, and Rust.
Databases	MySQL/MariaDB/Aurora DB, MSSQL, Neo4j, MongoDB, redis, PostgreSQL, firebase, couchDB, Oracle DB2
Frameworks/ APIs	node.js, Phoenix framework, Rocket framework, Vue.js, Vuex, React.js, Redux, angular.js, GraphQL, rtk-query, socket.io, CodeIgniter, Laravel, Google Web APIs, Twitter API, Facebook Graph API, pinia, fastapi, express, apollo, prisma, next.js
Software and Services	Amazon Web Services (AWS), Terraform, Google Cloud, Docker, Kubernetes, git, OPNet, BackTrack, Jira
Hardware	GPIO programming with Raspberry Pi and Arduino, Cisco Routers and Switches (ASR-9K, 7K, Catalyst 2700), racking servers, basic network setup
Systems	<i>20 years</i> - Windows (95/98/2000/XP/Vista/7/10/13) <i>16 years</i> - Linux/BSD environments (Ubuntu, Debian, Arch, Redhat, Fedora, FreeBSD)