NATHANIEL WILLIAM JOHNSON

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Technical skills

Languages	Elixir, Elm, Gleam, Go, Javascript, PHP, Python, Rust, and TypeScript.
Frameworks/ APIs	Angular.js, Apollo, CodeIgniter, Express, Fastapi, GraphQL, Laravel, Next.js, Node.js, Phoenix framework, Prisma, React.js, Redux, Rocket framework, RTK-query, Socket.io, Vue.js, and Vuex
Software and Services	Amazon Web Services (AWS), Confluence, Docker, Git, Google Cloud, Jira, Kafka, Kubernetes, Lucid Charts, Notion, RabbitMQ, Supabase, and Terraform
Concepts	Agile Methodology, Cloud Computing, Distributed Systems, Microservices, Model View Controller, OTP, Test-Driven Development, Version Control (git/github, SVN, CVS), Virtualization, and White/Black Box Testing.
Databases	Aurora DB, CouchDB, Firebase, MariaDB, MongoDB, MSSQL, MySQL, Neo4j, Oracle DB2, PostgreSQL, and Redis
Hardware	GPIO programming with Raspberry Pi and Arduino, Cisco Routers and Switches (ASR-9K, 7K, Catalyst 2700), racking servers, and basic network setup
Systems	*20 years:* Windows (95/98/2000/XP/Vista/7/10/13) *16 years:* Linux/BSD environments (Ubuntu, Debian, Arch, Redhat, Fedora, FreeBSD)

Education

North Carolina State University   Raleigh, NC
Computer Science B.S.   Class of 2014

Professional Experience

STORD   Charlotte, NC
Senior Software Engineer   August 2021 - Present
- **Spearheaded the development** of a warehouse management platform using Elixir and React as part of a 100-day sprint team, significantly enhancing operational efficiency of our warehouses.
- **Authored comprehensive technical design documents** for new features, including Swagger API specs, ERDs, test plans, and detailed task breakdowns in Jira, ensuring clarity and streamlined implementation.
- **Integrated multiple third-party APIs** (auth0, Easy Post, Shipium) to provide a unified interface for label printing and rate quotes, improving user experience and system functionality.
- **Enhanced STORD's order management system** with new features and optimizations using Elasticsearch, Kafka, PostgreSQL, Redis, and Elixir's GenServers, resulting in improved performance and scalability.
- **Developed a Phoenix Live View desktop application** enabling engineers to manage and run microservices locally, reducing development time and decreasing customer-reported bugs.
- **Contributed to the creation and maintenance of a public API for customers**, utilizing TypeScript, hono.js, and Cloudflare Workers to ensure high performance and reliability.
- **Designed and implemented deployment configurations** using Terraform and Helm for Google Cloud Kubernetes Engine, facilitating seamless and efficient deployments.
- **Led multiple "Lunch and Learn" sessions** on Elixir and its libraries (Ecto, Phoenix, LiveView), fostering team knowledge sharing and professional growth.
- **Implemented multiple data science ETL processes** leveraging stich.io and Python

Sprout ITAD   **Charlotte, NC**
Senior Software Engineer   February 2020 - August 2021
- **Spearheaded the modernization of an Elixir Phoenix API** enhancing it with Vue/Vuex frontend capabilities and successfully containerizing the application for AWS ECS deployment.
- **Innovated a dynamic subscription management layer within our Vue.js application**, enabling Sprout to offer a spectrum of subscription options, providing clients with tailored data access ranging from comprehensive yearly to concise monthly reports.
- **Seamlessly integrated key partner APIs**, including Comcast, WeWork, and Softthinks, to automate inventory updates in sync with warehouse processing, utilizing tools such as HTTPoison, Xmlbuilder, and Sweetxml.
- **Pioneered the integration of the Shopify API**, transforming our inventory management into a robust online storefront, significantly elevating sales and distinguishing our brand in the competitive ITAD market.
- **Executed a series of SQL query optimizations**, dramatically reducing execution times from over 30 seconds to less than a second, thereby enhancing system efficiency and user experience.

Passport   **Charlotte, NC**
Software Engineer III   October 2019 - February 2020
- Worked on shared services team using node.js + AWS lambdas for a brief period integrating netsuite before transitioning to Sprout for an elixir position.
- 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   June 2018 - October 2019
Software Engineer   May 2016 - June 2018
Associate Software Engineer   October 2014 - May 2016
- 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).
- Managed team of eight 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 levering AWS cloudfront, react/redux, and golang 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, vue.js, and PHP.
- Built survey platform which allows individual businesses to style their own survey templates or use existing templates in PHP + Laravel. Users submitted over 140,000 answers with this platform.

UNC Charlotte   **Charlotte, NC**
Teaching Assistant   February 2017 - October 2017

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Premier, Inc. (ITS)   **Charlotte, NC**
Associate Developer   July 2014 - October 2014

NC State University ITECS   **Raleigh, NC**
Student Web Developer   August 2012 - May 2014

Cisco Systems, Inc. (TRIAD)   **RTP, NC**
Software Engineering Intern   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/