Ryan **Van Valkenburg**

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Work Experience

Spectral Labs - AI/Crypto Startup
Remote
SOFTWARE ENGINEER - CONTRACT *06/2024 – 01/25*

- Developed complex type-safe Next.js with SSR and React components and custom hooks using TypeScript, ensuring robust state management and code maintainability across the platform.
- Designed and integrated WebSocket communication system for real-time LLM chat interface, handling streaming responses and managing complex application state.
- Implemented comprehensive blockchain functionality using wagmi and viem libraries, including wallet connections, smart contract interactions, and transaction management.
- Writing and integrate Elixir APIs via microservices with web channels to hook up websockets in the frontend while creating seamless data flow between AI agents, blockchain services, and frontend interfaces
- Integrating with HuggingFace SDK via Elixir, leveraging API interactions and enhance system scalability.

Seashell / Seamless Protocol - DeFi Startup
Remote
SENIOR SOFTWARE ENGINEER - FULL TIME *03/2023 – 03/2024*

- Developed and deployed a decentralized finance (DeFi) application on Next.js 13 App Directory within the Arbitrum blockchain at Seashell.
- Utilized wagmi hooks, viem, and rainbow-kit to seamlessly integrate web3 interactions, ensuring smooth and efficient blockchain interactions within the application.
- Contributed to the open-source community by forking Aave, Ampleforth Geysers and ENS Claims to maintain and allow for others to push forth open-source contributions.
- Two different protocols on the Arbitrum L2 chain, Coinbase's L2 Base chain and created the top protocol for the latter with a TVL of over 110 million.
- Founding engineer of Seamless Protocol on Base.

Snowcrash - NFT Platform Startup
Remote
LEAD FRONT END ENGINEER - CONTRACT *12/2022 – 02/2023*

- Spearheaded the adoption and implementation of Next.js with Styled-Components resulting in improved performance and maintainability of the Snowcrash marketplace.
- Developed and integrated gRPC microservices into a PostgresDB, enhancing the scalability and efficiency of the overall system architecture. • Modernized and streamlined the website by implementing new authorization patterns with Magic.Link, ensuring a secure and seamless user experience.
- Drove the adoption of Polygon blockchain technology to support a multichain NFT marketplace, enabling the onboarding of high profile partners with millions of followers.
- Delegated work tasks, provided guidance, and mentored junior developers to foster their professional growth and ensure successful project execution.
- Designed a system architecture based on a monorepo using Turborepo, component library with Storybook, and main client application, promoting code reusability and consistency across the Snowcrash platform.
- Onboarded National Geographic's first foray into web3 and NFTs with 'Daybreak Around the World' photography collaboration collection.

Gamestop NFT - Incubated Startup
Seattle, Wa
SOFTWARE ENGINEER - FULL TIME *12/2021 – 12/2022*

- Developed and maintained a user-friendly frontend interface for GameStop NFT's web3 application, leveraging Ethereum blockchain technology to ensure seamless and asynchronous web3 development.
- Implemented React and web3.js to create and manage user profiles, NFTs, collections, settings, features, and communications, enhancing the overall user experience.
- Utilized Storybook and a component library to provide easily consumable components, themes, and styling, while employing Redux Toolkit for efficient state management and API querying and caching. Thorough testing using React Testing Library, Jest, and snapshots.
- Contributed to the development of backend microservices using Node.js, Express, Go, and Postgres / RDS, hosted via Docker and Kubernetes.
- Configured and developed Cloudfront, S3, and Lambda functions on AWS to optimize performance, security and scalability while thriving in a fast-paced environment, adapting to shifting responsibilities throughout sprint cycles while maintaining a focus on the big picture.
- Onboarded two L2 blockchains in Loopring and IMX to help push community and professional art along with gaming assets and games onto the blockchain via approved artists uploading through our contracts and moderation done with HIVE.

Nota - Incubated Startup
Remote

SENIOR SOFTWARE ENGINEER - FULL TIME · *04/2021 – 12/2021*

- Collaborated with cross-functional teams to develop and integrate React, Redux Sagas, Java, and Spring Boot micro-services for accounts with M&T Bank, financial institutions, and legal integrations, ensuring seamless functionality and data flow.
- Led the transition of the front-end architecture to a micro-frontend architecture using Module Federation and Webpack, enabling efficient onboarding of triple the number of developers and improving scalability.
- Advocated for the adoption of frontend development tools such as Storybook, Fullstory, and Component Libraries, enhancing development efficiency and code quality.
- Implemented modern best practices including mobile-first responsive development, accessibility(a11y), internationalization (i18n), and performance optimization, ensuring a user- friendly and inclusive experience.
- Maintained DevOps processes using Docker, Terraform, GitLab CI/CD, AWS, and Argo CD stack, ensuring smooth deployment and continuous integration for the application.
- Offered a suite of tooling backed by M&T bank accounts to allow for smaller law firms to move off of simple apps like Quickbooks to do their accounting and IOLTA work.

Microsoft - Game Studios
Redmond, Wa

SOFTWARE DEVELOPMENT LEAD - CONTRACT · *05/2020 – 04/2021*

- Consulting for Microsoft on Minecraft.net and led and mentored a team of twelve developers, fostering a culture of best practices in web development with a focus on React, Typescript, Webpack, NX Monorepo, and Python with Django.
- Implemented modern web development strategies to ensure data privacy, accessibility, scalability, and performance across multiple sites.
- Successfully managed the migration of account, cookie, and networks from Mojang to Microsoft Accounts after acquisition, collaborating with KBL, MSA, Stockholm Mojang, and other Microsoft managed services.
- Spearheaded the setup of a robust Java CMS in Docker and deployed a Kubernetes cluster on Azure to optimize the development environment.
- Navigated the acquisition of Mojang and brought the entire Minecraft web project into the Azure/Microsoft ecosystem from Python/AWS.

Boeing - Corporate
Seattle, Wa

SENIOR SOFTWARE ENGINEER - FULL TIME · *06/2015 – 05/2020*

- Developed and maintained a robust React and Typescript UI for building tooling, visualizations, and usermanagement, using modern state management in hooks and context also following industry-standard testing patterns such as Jest/Enzyme/Mocha.
- Charting and data visualizations using libraries like D3.js and react-charts to deliver powerful data to the C-suite.
- Leveraged Node with Serverless architecture to manage requests via Azure Functions, resulting in improved reliability and cost-effectiveness.
- Utilized CI/CD setup for web application deployment, employing automated testing to seamlessly deploy to Azure App Services from GitLab.
- Designed and implemented a REST micro-service for Teradata readonly data and application, integrating DevOps practices through GitLab/Docker/Pivotal/Cloud Foundry CI pipeline.
- Architected a scalable front-end platform solution for multiple teams across the globe, utilizing micro front-end architecture approaches.
- Conducted a successful GraphQL Proof of Concept (PoC) to integrate and consolidate multiple data sources for consumption by multiple front-end applications.
- Developed a custom business rule engine with hundreds of custom business rules in annotations, ensuring accurate and efficient data processing.
- Implemented NoSQL with MongoDB for database management, along with services to transfer data into SQL Teradata database to support legacy system's data needs.
- Contributed to a slew of applications across the company from:
- HR - Careers@Boeing, Lockbox (PIIData), SupplyChain - Airplane Reliability Management System(ARMS), Finance - C-Suite Boeing Management System (BMS), Operations - FlightDeck Advisor (IoT fuel efficiency via raspberry PI and IPad for Pilots)

Education

Washington State University
Pullman, Wa

BA IN MANAGEMENT INFORMATION SYSTEMS · *2010 – 2015*

Washington State University
Pullman, Wa

BA IN SOCIAL SCIENCES · *2010 – 2015*

Skills

Languages	Typescript/Javascript, Go, Java/Kotlin, Solidity
Frameworks/Libraries	React, Next.js, Express/Fastify, Gin, Spring, Foundry/Hardhat
Platforms	AWS, Azure, PCF, EVM
AI Tooling	Prompt Engineering, Langchain, HuggingFace, Cursor, Windsurf, deAI