

# Ryan Van Valkenburg | Full Stack Engineer

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With a 9-year track record in **software engineering** and recent experience in **AI-driven applications**, I excel in designing and implementing robust, scalable, and secure systems. My expertise spans full-stack development, integrating with complex on-chain and off-chain technologies, and leveraging artificial intelligence for various applications, from trading agents to real-time chat.

## Key Achievements

- **Successfully launched and optimized an autonomous trading agent system** using AI on Hyperliquid, managing an agent-run fund and providing a framework for builders to create their own agentic companies with pre-built workflows.
- **Voice agent integrations and fine-tuning with whitelabeling service** monetization pathway for bringing on more exclusive features to “partnered” companies.
- **Led the development of a high-impact DeFi protocol** on Base chain, achieving over \$110 million in Total Value Locked (TVL) and a successful day-one governance token launch on Coinbase.
- **Developed and integrated advanced vault systems** layering ERC-4626 vaults with stable yield and leveraged vaults for various tokens.

## Technical Skills

**Languages:** Typescript / Javascript, Go, Python, Java, Rust, Solidity

**Development:** React, Next.js, NodeJs, Viem, Wagmi, Foundry

**Monitoring:** Sentry, Github Actions, CI/CD Codecov, Tenderly TestNet, The Graph

**Security Analysis:** Slither, Woke, Foundry Fuzz

**DevOps:** K8s / Docker, ArgoCD, Jenkins, CDK, Pulumi, Terraform, IPFS

**AI:** LangGraph, LangChain, HuggingFace, Pinecone, Milvus/Zilliz

## Experience

### heyLibby.ai | SOFTWARE ENGINEER | 04/2025-06/2025

- Designed and integrated WebSocket communication for **real-time LLM chat and Voice protocols** using Deepgram, Eleven Labs, and OpenAI.
- Built API Key vending and proxy through AWS with JWT, Cognito, and Lambda Authorizers for new monetization streams.
- Refactored React/TS to Next.js to enhance white-labeling for applications, documentation, SEO, and performance.

### Spectral Labs | SOFTWARE ENGINEER - CONTRACT | 06/2024-01/2025

- Developed complex type-safe Next.js applications with SSR, React components, and custom hooks using TypeScript.
- Designed and integrated WebSocket communication for a **real-time LLM chat interface**.
- Implemented comprehensive blockchain functionality using wagmi and viem libraries (retained for context, but de-emphasized).
- Wrote and integrated Elixir APIs via microservices with web channels, including Hugging Face SDK and Langchain integration for **AI-powered features**.

## **Seashell / Seamless Protocol | SENIOR SOFTWARE ENGINEER | 03/2023-03/2024**

- Developed and deployed a decentralized finance (DeFi) application on Next.js 13 App Directory within the Arbitrum blockchain.
- Utilized wagmi hooks, viem, and rainbow-kit to seamlessly integrate web3 interactions.
- Contributed to open-source by forking Aave, Ampleforth Geysers, and ENS Claims.
- Created two protocols on Arbitrum L2 and Coinbase's L2 Base chain, with one achieving over \$110 million TVL, as a founding engineer of Seamless Protocol on Base.

## **Snowcrash - NFT Platform | LEAD FRONT END ENGINEER - CONTRACT | 12/2022-02/2023**

- Spearheaded the adoption and implementation of Next.js with Styled-Components, improving performance and maintainability.
- Developed and integrated gRPC microservices into a PostgreSQL.
- Modernized the website by implementing new authorization patterns with Magic.Link and drove Polygon blockchain adoption for a multichain NFT marketplace.
- Designed a monorepo system architecture and onboarded National Geographic's first web3 and NFT collaboration.

## **Gamestop - NFT Platform and Extension Wallet | SOFTWARE ENGINEER | 12/2021-12/2022**

- Developed and maintained a user-friendly frontend interface for GameStop NFT's web3 application, leveraging Ethereum blockchain technology.
- Implemented React and web3.js to manage user profiles, NFTs, and communications, utilizing Storybook and Redux Toolkit for components and state management.
- Conducted thorough testing using React Testing Library, Jest, and snapshots.
- Contributed to backend microservices (Node.js, Express, Go, PostgreSQL/RDS) and configured AWS services (Cloudfront, S3, Lambda).

## **M&T Bank | SENIOR SOFTWARE ENGINEER | 04/2021-12/2021**

- Collaborated on developing and integrating React, Redux Sagas, Java, and Spring Boot micro-services for various financial and legal integrations.
- Led the transition of the front-end architecture to a micro-frontend architecture using Module Federation and Webpack, enabling efficient developer onboarding and improved scalability.
- Advocated for and implemented frontend development tools such as Storybook, Fullstory, and Component Libraries, and modern best practices including mobile-first responsive development, accessibility, internationalization, and performance optimization.
- Maintained DevOps processes using Docker, Terraform, GitLab CI/CD, AWS, and Argo CD stack.

## **Microsoft | SOFTWARE DEVELOPMENT LEAD - Consulting | 05/2020-04/2021**

- Consulted for Microsoft on Minecraft.net, leading and mentoring a team of twelve developers focusing on React, Typescript, Webpack, NX Monorepo, and Python with Django.
- Implemented modern web development strategies for 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.
- Spearheaded the setup of a robust Java CMS in Docker and deployed a Kubernetes cluster on Azure, integrating the Minecraft web project into the Azure/Microsoft ecosystem.

## **Boeing | SENIOR SOFTWARE ENGINEER | 06/2015-05/2020**

- Developed and maintained a robust React and Typescript UI for tooling, visualizations, and user management, incorporating modern state management and industry-standard testing patterns.
- Created charting and data visualizations using D3.js and react-charts, and leveraged Node with Serverless architecture via Azure Functions.
- Utilized CI/CD for web application deployment to Azure App Services from GitLab, and designed/implemented a REST micro-service for Teradata data.
- Architected a scalable front-end platform solution for multiple global teams using micro front-end approaches, and conducted a GraphQL PoC to consolidate data sources.

## Projects

### Valkyrie Finance | AI, dApp, Smart Contracts | 01/2025 - Present

- App development with Next.js, Viem/Wagmi, Tailwind, and Go for AI Engine.
- Smart Contract with Solidity and Foundry, incorporating cross-chain swaps and off-chain AI-driven analytics and suggestions.
- Web platform to interface with ERC-4626 Vaults driven by AI strategies.

## Education

### Washington State University | Pullman, Wa | 2010-2015

- Bachelor's in Management Information Systems
- Bachelor's in Social Sciences