

Andrew Rose

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Experience

Saturna Capital

Jul 2022 – Present

Software Engineer

Bellingham, WA

- Architected and deployed a microservices-based employer services platform (NestJS, PostgreSQL, RabbitMQ) supporting HSA and 401(k) operations, improving system scalability and API response times by 25%.
- Led end-to-end development of Finch API integration, enabling direct payroll system connections and eliminating manual CSV uploads. Reduced payroll errors by 30% and saved employers 2+ hours per cycle.
- Automated fund data ingestion by integrating Lipper, replacing Morningstar and increasing fund performance data update frequency from weekly to daily and saving the company 70% in expenses.
- Developed ACH (NACHA) file generation and trading transaction services to interface with NSCC/DTCC, enabling automated allocation and execution of investment trades.
- Created an automated Jira ticketing service to trigger incident or workflow tickets for operations agents based on system events and error conditions, improving issue resolution time.
- Designed and implemented GitLab CI/CD pipelines for automated testing and multi-environment Docker deployments, reducing release friction and increasing deployment success rate.
- Optimized file parsing to reduce memory usage by 60% and processing time by 45%, enabling stable ingestion of high-volume payroll data.
- Participated in Agile sprints, stakeholder meetings, and cross-functional planning sessions using Jira and Confluence to deliver features on schedule.

Swinomish Casino and Lodge

Jan 2019 – Jul 2022

Network Engineer

Anacortes, WA

- Managed enterprise network performance and security, reducing downtime by 25% through proactive monitoring and troubleshooting.
- Automated Windows deployments and updates with PowerShell, cutting system update time by 40%.
- Led compliance-driven infrastructure upgrades to align with industry security standards.

Education

Western Washington University

Dec 2022

Bachelor of Science in Computer Science, Minor in Mathematics

Bellingham, WA

Projects

Dice Rolling Roguelike Game | C#

- Developed a roguelike dice-based combat game with procedurally generated maps and customizable dice face mechanics.

Finance Assistant | Node.js, Next.js, PostgreSQL, Hasura, Plaid API

- Built a financial tracking application with Plaid API integration, enabling secure data retrieval and automated expense categorization.

NYSE Trading Bot | Python, Alpaca API

- Developed an autonomous tool for equity buy/sell orders on the NYSE, utilizing Python and the Alpaca API for order initiation and backtesting.
- Achieved a 6% increase in profitable trades by optimizing trading strategies based on historical data analysis.

Technical Skills

Languages: Python, TypeScript, C++, C#, Java, Kotlin

Technologies: NestJS, React.js, Next.js, Hasura, Node.js, Express.js, Electron, RabbitMQ, GitLab CI/CD, Docker, Docker Swarm, Confluence, Jira, Pexplexity AI

Concepts: Microservices Architecture, API Design, Distributed Systems, Cloud Deployments, Data Pipelines, Agile Development, CI/CD, Test Automation, Database Management