John Carroll

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Senior software engineer with B.S. & M.S. in Computer Science specializing in full-stack development, cloud infrastructure, and technical leadership.

EDUCATION

Worcester Polytechnic Institute (WPI)   Worcester, MA
Master of Science in Computer Science; GPA 3.73/4.00   Aug 2018 – May 2022
Bachelor of Science in Computer Science; Minor in Chinese Studies; GPA 3.70/4.00

EXPERIENCE

CVS Health   Boston, MA
Senior Software Development Engineer   Nov 2024 – Present
- Designed and deployed scalable Databricks infrastructure with automated workflows that reduced code promotion from hours to minutes and enabled seamless integration across environments
- Automated development workflows using GitHub Actions for code quality, testing, security scanning, infrastructure, and deployments, achieving 90% reduction in manual workflows while enabling self-service deployment and infrastructure management through Terraform-backed workflows
- Serve as technical lead and liaison between engineering teams and business stakeholders, driving feature development for production clinical applications
- Conduct code reviews and establish development standards across application teams

Software Development Engineer   May 2022 – Nov 2024
- Architected and developed internal clinical application on Azure using Kubernetes, servicing millions of members across pharmacy operations
- Served as full-stack developer and cloud architect, implemented infrastructure as code, orchestrated CI/CD pipelines, and conducted code reviews

Software Engineer Intern   May 2021 – Aug 2021
- Developed minimum viable product for clinical question set application as full-stack developer

The Federal Reserve Board of Governors   Washington, D.C.
Technology Analyst Intern   Jun 2020 – Aug 2020
- Built interactive dashboard using Python and R to analyze server data and present critical network performance insights to Board members

PROJECT WORK & RESEARCH

Financial Management Dashboard   June 2025 – Present
- Built Next.js financial management platform for freelance client, integrating external data sources with automated alerts and growth projections
- Implemented real-time asset tracking, pro forma statements, budget forecasting, and market analysis using 15+ indicators across crypto cycles, traditional indices, and liquidity cycles

Investment Analysis Platform   June 2025 – Present
- Developed full-stack investment platform with systematic analysis framework and real-time performance tracking using market data APIs
- Implemented tax-lot accounting system with real-time P&L calculations and performance metrics across multiple asset classes

Major Qualifying Project (MQP): *USDA Food Poisoning Prevention, WPI*   Aug 2021 – April 2022
- Built machine learning tool to predict foodborne illness outbreaks from social media and news sources, deployed as web-based analytics platform

TECHNICAL SKILLS

- **Programming Languages:** Scala, Java, Kotlin, Python, JavaScript, TypeScript, Dart, HTML/CSS
- **Frameworks:** React, Next.js, Angular, Flutter, Spring Boot
- **Cloud & Data Infrastructure:** Azure, AWS, Databricks, Docker, Kubernetes, Postgres, Supabase
- **Tools & Methodologies:** Git, Jenkins, CI/CD, Agile/Scrum, Jira
- **Languages:** English (native), Mandarin Chinese (intermediate)