Cole Morton

Senior Software Engineer | AI-Augmented Development | Full-Stack Architecture

Brisbane QLD 4032 | cole.morton@hotmail.com | 0415 583 331

linkedin.com/in/cole-morton-72300745 | colemorton.com | github.com/colemorton

Professional Summary

Senior Software Engineer with 11+ years delivering enterprise-grade systems across fintech, healthtech, and digital commerce platforms. Career progression from foundational commercial roles building healthcare systems for Australian hospitals and frontend platforms for German startups, to advanced independent technical leadership architecting generative content systems and quantitative trading software. Demonstrated expertise spans from .NET enterprise applications, to React/ReactNative/Angular web/mobile applications and cutting-edge AI tooling. Proven ability to scale development teams, deliver under regulatory compliance requirements, and architect scalable production systems. Currently building agentic AI pipelines, personal web-site, data analysis, and N8N automation as demonstrated through daily GitHub contributions over the past year. Actively seeking opportunities to contribute deep commercial expertise and modern development practices to Brisbane's thriving tech scene.

Core Competencies

- Full-Stack Technical Expertise: 11+ years from .NET enterprise foundations to modern React/ TypeScript/Python stacks with quantitative analysis capabilities

- Team Leadership & Scaling: Grew CrossLend development team from 3 to 20+ developers while maintaining platform stability and regulatory compliance

- Regulatory Systems Experience: Healthcare compliance (hospital oncology systems), FinTech regulations, enterprise-grade reliability across critical applications

- Production Systems Architecture: Hospital systems, fintech lending platforms, React Native applications, institutional-grade content generation systems

- Independent Technical Leadership: Architected platform processing 20+ financial APIs, delivered complex projects as sole developer

- Global Experience, Brisbane Established: Proven delivery across Australia, Germany, New Zealand with current Brisbane residence and local availability

Skills

Frontend Technologies

- **React**, **TypeScript**, **NextJS**, Astro, Vue, Angular, React Native, TailwindCSS, JavaScript, HTML5, CSS3

Backend Technologies

- **NodeJS**, **FastAPI**, Express.js, PrismaORM, Python 3.10, Data Processing (Pandas, NumPy), .NET, C#

AI & Modern Technologies

- **Claude Code**, **Cursor IDE**, Open Router, GenContentOps, AI-augmented development

Domain Expertise

- **PWA**, **SPA**, **Full-stack architecture**, Interactive dashboards, Finance & Trading Systems, Data Processing & Visualization, AI-driven content generation, Automation scripts

Databases & DevOps

- **Git**, **NPM**, Webpack, Docker, PostgreSQL, GitHub (Actions), Travis CI/CD, Vercel, Netlify

Testing & Methodologies

- **Test Driven Development**, **End-to-End Testing**, **Agile/Scrum**, Playwright, Jest, Pytest, Unit Testing, SOLID principles, Kanban, DRY, KISS, YAGNI, Fail-fast principles

Experience

Independent Software Developer & Personal Web Site | Sensylate Platform

August 2024 - Present | Brisbane, Australia

Generative Content Operations (GenContentOps): 20+ financial APIs and economic data integrated into institutional-grade content generation system.

- Architected enterprise-grade GenContentOps platform with 21-command AI orchestration integrating 20+ financial APIs, generating 100+ institutional-quality analyses achieving 9.2/10 maturity score
- Implemented multi-phase agentic workflow (DASVP) with contract-driven data pipeline, factory patterns, and automated quality gates ensuring 9.0+ confidence thresholds across all content generation
- Built full-stack platform using Python 3.10 backend with Astro 5.12+/React 19/TailwindCSS 4 frontend, demonstrating sophisticated service orchestration and multi-modal content generation at scale
- Developed 4-tier AI classification system (Infrastructure/Feature/Assistant/Sub-agents) with fail-fast validation, comprehensive audit trails, and institutional-grade compliance framework

Technologies: Python 3.10, TypeScript, Astro 5.12+, React 19, TailwindCSS 4, Pandas 2.0+, NumPy, Plotly, Pytest, Jinja2, Anthropic Claude Code, Open Router, Cursor

Project: GitHub Repository | Web Site

Quantitative Trading Systems Architect | Quantitative Analysis Suite

Dec 2022 - Present | Berlin, Germany

Comprehensive quantitative analysis toolkit for trading strategies and portfolio management with advanced risk analytics and optimization capabilities using Python, Pandas, and statistical modeling.

- Built distributed backtesting engine analyzing 1M+ strategy permutations across multi-decade datasets with memory-optimized processing and parallel execution using Python 3.10 and Pandas 2.0+
- Implemented comprehensive Value-at-Risk and Conditional VaR modeling with Kelly Criterion optimization and multi-factor risk attribution using NumPy, Plotly, and Seaborn
- Developed systematic portfolio construction with correlation-based risk clustering, efficient frontier visualization, and Monte Carlo stress testing
- Created advanced signal quality assessment with efficiency scoring algorithm and alpha generation analysis across concurrent trading strategies

Technologies: Python 3.10, Pandas 2.0+, Polars, NumPy, Plotly, Seaborn, Pytest

Senior Software Engineer | Oetker Digital GmbH

Jul 2018 - Oct 2020 | Berlin Area, Germany

Developed enterprise web applications using React, TypeScript, and Node.js across diverse technology stacks. Collaborated cross-functionally with multiple teams using Agile/Scrum methodologies to deliver scalable solutions for restaurants, hotels, and businesses.

- Built progressive web applications (PWA) and single-page applications (SPA) using React.js, Vue.js, TypeScript, and Styled Components with Storybook for component development
- Implemented CI/CD pipelines with GitHub Actions, automated testing using Jest and Cypress, and optimized build processes with Webpack
- Developed backend APIs using Node.js, Express.js, and Apollo GraphQL with PostgreSQL database integration using Prisma ORM
- Collaborated in fast-paced Agile environment with seamless cross-team collaboration and rapid prototyping of innovative solutions

Technologies: React.js, Vue.js, TypeScript, Styled Components, Storybook, Node.js, Express.js, Apollo GraphQL, Prisma ORM, PostgreSQL, Jest, Cypress, Webpack, GitHub, VSCode

Senior Software Developer | Panorama Berlin

Mar 2018 - Jun 2018 | Berlin Area, Germany

Developed React Native mobile application for fashion show QR ticket scanning solution, serving both event staff and attendees with real-time monitoring and error tracking.

- Architected and developed React Native mobile application with QR code scanning functionality for fashion show event management
- Implemented robust QR scanning feature with integration capabilities for booth promotions and special offers using Service Workers and PWA technologies
- Deployed production monitoring using Sentry for real-time error tracking and performance optimization across diverse mobile devices
- Delivered complete project on time with flawless QR code scanning functionality, earning direct invitation to join CTO at Oetker Digital

Technologies: React Native, React.js, Node.js, Express.js, PostgreSQL, PWA, Service Workers, Sentry

Senior Frontend Developer | CrossLend GmbH

Jul 2015 - Jun 2016 | Berlin/Luxembourg

Led development team scaling from 3 to 20+ developers while building fintech lending platform with React.js, ensuring regulatory compliance and platform stability throughout rapid growth.

- Scaled development team from 3 to 20+ developers while maintaining platform stability and regulatory compliance in fintech environment
- Introduced React.js to fintech startup, building lending platform with PostgreSQL database and Test Driven Development practices
- Implemented Continuous Integration pipelines and maintained high standards during rapid team expansion and platform growth
- Ensured regulatory compliance and accuracy in financial technology environment with enterprise-grade reliability

Technologies: React.js, Angular.js, PostgreSQL, Test Driven Development, Continuous Integration

Early Career Software Developer | Multiple Organizations

Oct 2009 - July 2015 | Germany, Australia, New Zealand

Developed enterprise applications across diverse industries including banking, healthcare, and mobile platforms. Led frontend development for major German banking client architecting scalable AngularJS application with comprehensive testing strategy using Karma and Protractor. Built critical healthcare systems for Australian hospitals including oncology and patient management system for Chris O'Brien Lifehouse at Royal Prince Alfred Hospital with strict regulatory compliance using .NET, C#, and SQL Server. Contributed to Door2More freight tracking system for DHL Global Freight using ASP.NET and Entity Framework. Additional roles included React-based search UI development with Redux/Redux-Saga architecture and iOS application feature development. Established strong foundation in enterprise software development, Test Driven Development, and Agile methodologies.

Technologies: AngularJS, React.js, .NET, C#, ASP.NET, JavaScript, Node.js, SQL Server, Entity Framework, PostgreSQL, WCF, Redux, Karma, Protractor, Gulp.js

Education

Diploma in Software Development | Computer Power Institute

2008 - 2009 | Christchurch, New Zealand

Major: MCAD (Microsoft Certified Applications Developer) specializing in C# and ASP.NET development. Comprehensive training in Microsoft technologies, object-oriented programming principles, and enterprise application development.