

Brian Coffey

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Summary

Software Engineer experienced in designing and delivering secure, scalable ASP.NET Core applications for enterprise HR, financial, and operational systems. Proven track record modernizing legacy data pipelines, automating critical workflows, and delivering production-grade APIs that drive measurable efficiency. Skilled in leading Agile teams, managing full SDLC delivery, and contributing to system design and architecture decisions. Active Secret clearance.

Work Experience

United States Air Force

09/2023 - Current

Software Engineer

Edwards AFB, California

- Recovered \$10M+ in reimbursable funds by engineering a multi-source civilian pay aggregation system integrating 3+ APIs to reconcile payroll data across enterprise systems.
- Modernized a payroll analytics platform (ASP.NET Core, EF Core, SQL Server), replacing on-demand Excel reports with scheduled, high-throughput database-driven pipelines, reducing report latency from 5–10 minutes to seconds for datasets exceeding 100M records.
- Automated manual reconciliation workflows, cutting analyst processing time by 260+ hours per month while improving accuracy across payroll and HR datasets.
- Architected an enterprise personnel auditing and HR workflow platform used by 250+ personnel, replacing ad hoc email-based processes with a centralized, auditable action pipeline.
- Exposed workforce analytics via RESTful APIs for direct Power BI integration, enabling real-time leadership dashboards without requiring application access.

Project

Portfolio - Full-Stack Enterprise Applications

01/2026 - Current

Software Engineer

Riverside, California

GitHub: github.com/brianpcoffey/gis-portfolio | Live Demo: brianpcoffey.com

- Built and deployed a full-stack web platform on ASP.NET Core 10 and C#, delivering 18 interactive applications backed by secure REST APIs with Google OAuth 2.0, role-based authorization, Redis caching, and Entity Framework Core over PostgreSQL.
- Developed 13 high-performance C++ modules integrated with C# through native interop, powering route optimization, geospatial clustering, terrain visibility analysis, risk simulation, and satellite image change detection.
- Created an automated performance benchmarking suite comparing each C++ module against its C# equivalent, publishing measured results and surfacing two defects that had previously gone undetected.
- Implemented a CI/CD pipeline in GitHub Actions that runs 680 automated tests, validates the Docker production image, and gates deployment on every commit.

Education

University of California, Riverside

09/2018 - 06/2022

B.S. Computer Science

Riverside, California

Certifications

CompTIA Security+

12/2024 - Current

Active Secret Security Clearance

01/2024 - Current

Skills

Languages: C#, C++, JavaScript, SQL, HTML, CSS

Backend & APIs: ASP.NET Core, REST APIs, LINQ, native interop (P/Invoke), Polly, SignalR, Serilog, OpenAPI/Swagger, OpenXML

Databases & Tools: SQL Server, PostgreSQL, Redis, EF Core, Docker, Kubernetes, Git, GitHub Actions, Azure DevOps

Frameworks & Frontend: .NET, Entity Framework Core, Bootstrap, Kendo UI, jQuery, Leaflet, ArcGIS

Testing & Security: xUnit, Moq, automated testing, Fortify (SAST), DevSecOps practices, RBAC, policy-based authorization

Methodology: Agile Scrum, sprint planning, backlog management, requirements analysis