Matheus Castro

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Active TS/SCI Clearance | Fayetteville, NC

Professional Summary

Full-Stack Software Engineer with an active TS/SCI clearance, Microsoft's Software & Systems Academy (MSSA) alumni of the Cloud Application Development program. Builds web, desktop, cross-platform, and cloud applications with C#, .NET, React, Node.js, and Microsoft Azure, supported by REST API design, CI/CD pipelines, and disciplined AI-assisted development. Proven experience keeping mission-critical, networked systems available in high-security environments, translating complex technical requirements into reliable solutions, and quickly mastering new technologies.

Core Skills and Competencies

Programming Languages: C#, JavaScript, SQL, Python, HTML, CSS

Frameworks and Tech: .NET, ASP.NET, .NET MAUI, Blazor, WinForms, WPF, Entity Framework Core, React, Vite, Node.js, Express.js, REST APIs, TailwindCSS

Databases: SQL Server / Azure SQL, PostgreSQL, MongoDB, SQLite

Cloud and DevOps: Microsoft Azure, Git, GitHub, GitHub Actions, CI/CD, CodeQL, Dependabot

Software Engineering: Object-Oriented Programming (OOP), Full-Stack Development, API Design, Dependency Injection, Service-Oriented Architecture, MVVM, Data Structures & Algorithms, Debugging & Troubleshooting, Unit & Integration Testing (xUnit, Jest, Supertest), Agile / SDLC

AI-Assisted Development: GitHub Copilot, Claude Code, Context-Aware Agentic AI Development Pipelines, Harness Engineering

Leadership: Team Training & Mentorship, Personnel Management, Crisis Resolution

Spoken Languages: English and Portuguese (native), Spanish (professional)

Professional Experience

Microsoft Software & Systems Academy | Cloud Application Development | 07/2026 – 11/2026

- Develop full-stack, desktop, and cloud applications with C#, .NET, ASP.NET, Blazor, WinForms, and WPF in an intensive 17-week, full-time program completed through DoD SkillBridge.
- Design and deploy Microsoft Azure solutions using C# and Python, integrating Azure services and cloud-native patterns for scalable, resilient applications.
- Built .NET 10 applications using interfaces, loose coupling, and data binding, including StudentRegistry, a WinForms records system with authentication, CRUD, and GPA tracking.
- Implement core data structures and algorithms in C#, evaluating time and space trade-offs to select efficient solutions.
- Use Git and GitHub for version control, peer code reviews, and Agile iteration; apply GitHub Copilot and Claude Code to accelerate debugging, testing, and documentation.

Freelance Developer | InvoiceMe Full-Stack Application | 2024 – 2025

- Designed and built a full-stack MERN (MongoDB, Express.js, React, Node.js) platform for small-business customer management and invoicing, with a responsive React, Vite, and Tailwind CSS UI.
- Developed a versioned RESTful API for customers, invoices, and state-based tax calculation, with PDF invoice export.
- Implemented validation middleware, centralized error handling, duplicate prevention, and pagination to improve reliability and scalability.
- Wrote 80 Jest and Supertest API tests against an in-memory MongoDB, run in GitHub Actions CI alongside CodeQL security scanning and Dependabot updates.
- Reduced administrative effort by approximately 6 hours per week through automation of manual business processes.

U.S. Army | Air Defense Battle Management System Operator (14G) | 05/2025 – 11/2026

- Integrate, maintain, and troubleshoot networked connectivity across 5+ mission-critical air defense platforms (FAAD, AMDWS, Sentinel, ADSI, CDLIM) exchanging near-real-time data, with a 100% uptime goal.
- Diagnose and resolve hardware, software, network, and system-integration faults under time pressure to sustain operational readiness.
- Lead and mentor 6 junior soldiers on procedures, troubleshooting methodologies, and technical system operations.
- Coordinate across multiple teams to maintain system availability in secure, TS/SCI-cleared, high-availability environments.

Personal Projects

BabyBuddyHelper | Cross-Platform Application | github.com/MatheusCastro99/BabyBuddyHelper
C# • .NET MAUI • Entity Framework Core • SQLite • Syncfusion • Claude API • xUnit • GitHub Actions

- Built an offline-first parenting companion app for Windows, macOS, Android, and iOS with task, appointment, and baby-profile management.
- Architected a service-oriented design with interface-based services and dependency injection, persisting data locally with Entity Framework Core and SQLite.
- Integrated a scoped Claude chat companion that validates every reply with code checks and a second LLM grading call before display, keeping the user's API key in secure storage.
- Wrote 155 xUnit tests across services, models, and the Claude chat client, run in GitHub Actions CI with build validation, CodeQL, and Dependabot.

ProdHarnessConfig | Production AI Harness | github.com/MatheusCastro99/ProdHarnessConfig
Claude Code • Node.js • Hooks • Subagents • Skills • Model Routing

- Engineered a production Claude Code harness from measured session data, cutting per-issue cost by about 50% versus the measured baseline median in final-configuration runs.
- Restructured a 12-stage, 7-gate workflow into 4 blocks with 2 approval gates, routing planning and review to Opus and autonomous builds to Sonnet, and cut peak context from ~300k to ~125k tokens.
- Built deterministic Node.js hooks that lint every edit, block completion while checks fail, and block commits that leave docs stale; the independent red-team review caught 4 of 4 seeded defects.

HarnessEngineering101 | Study Kit | github.com/MatheusCastro99/HarnessEngineering101
Claude Code • Context Engineering • Subagents • Skills • GitHub Actions

- Published an open study kit for a reusable AI coding-agent workflow: context documents, red-team and historian subagents, guardrail skills, and owner approval gates.
- Built an interview-driven onboarding skill that drafts a project's context, skills, and agents across four approval checkpoints before anything is committed.

Education & Technical Training

Montclair State University | Computer Science Coursework (B.S. Program) | 2022 | GPA 3.8

Union County College | Associate in Science: Criminal Justice | 2021 | GPA 4.0, Dean's List

Advanced Individual Training | Air Defense Battle Management System Operator | 2025

- Distinguished Honor Graduate (99.8% average) in air defense network communication, administration, troubleshooting, and secure systems integration.

Certifications

New Horizons | AZ-900: Introduction to Microsoft Azure • AI-901: Introduction to AI in Azure • .NET MAUI • Programming in C# • Data Structures and Algorithms • Introduction to Programming Using C# | 2026
Foundational C# with Microsoft | freeCodeCamp | 04/2026

Code changes, Technology evolves, Logic persists!