# Joseph Ressler

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## PROFESSIONAL SUMMARY

Versatile programmer with proven experience in Blazor, Cloud Engineering, and artificial intelligence, specializing in building bespoke web applications, robotic & IoT interfaces, and augmented AI. Demonstrated success in production-ready development projects, optimizing system performance, advocating for user stories and accessible user experiences, and collaborating with team members to achieve project milestones. Skilled in translating complex technical challenges into innovative solutions.

## EDUCATION

**Clark University**                                                                                             Worcester, MA
*Bachelor's in Game Programming*                                                              *Aug. 2020 – May 2024*

## EXPERIENCE

**Accu-Assembly Inc.**                                          Hybrid (Providence, RI / N. Reading, MA)
*Software Engineer (Contract)*                                                       *September 2024 – Present*
- Developed full-stack Blazor Server applications interfacing with robotic and IoT devices from start to install at customer locations
- Designed and trained custom computer vision models for object classification and segmentation, achieving >95% accuracy
- Wrote and implemented a versatile plugin system to extend products for alternate customer needs across multiple user stories.

**KC Embers**                                                                                                  Barrington, NH
*Game Programmer (Volunteer)*                                                 *January 2024 – September 2024*
- Engineered backend components for core gameplay systems, enhancing overall game performance
- Refactored existing code to implement advanced object-oriented programming principles, improving scalability and maintainability

**Clark University**                                                                                            Worcester, MA
*Teaching Assistant, Computer Programming C++ (Volunteer)*                    *August 2023 – May 2024*
- Facilitated student learning by delivering clear, concise explanations of complex programming concepts
- Provided comprehensive code debugging support in classroom, office hour, and tutoring environments

**Alumni Ventures**                                                                                         Manchester, NH
*Special Project Assistant (Internship)*                                              *June 2023 – August 2023*
- Conducted in-depth research to establish groundwork for an industry-specific focus fund
- Performed data analysis and generated strategic reports to track project progress and measure key success metrics

## PROJECTS

**AccuCart Inventory Management System** | *C#, Blazor, T-SQL/LINQ*
- Developed an enterprise-ready internal-use data-interfacing web application using Blazor
- Facilitates non-technical user access to sophisticated digital-twin inventory system for microcomponents prior to mounting
- Implemented secure data access and manipulation using EF Core and ODBC to enable robust two-way IoT communication

**Component Detection ML System** | *PyTorch, Computer Vision, Python, Mask R-CNN*
- Developed an instance segmentation system using PyTorch Mask R-CNN transfer learning to detect and classify microcomponents
- Implemented custom dataset handling, data augmentation pipeline, and semi-automatic annotation tools
- Trained 2 employees on the data annotation process and basic training steps to further refine models

**AccuLiFT Blazor Service App** | *C#, Blazor, Javascript*
- Created Windows Service application for robot and data interfacing using Blazor
- Ensured secure data manipulation through EntityFramework Core implementation

**Flask Website** | *Linux, Nginx, MariaDB, Flask, React (TS), Golang, AWS EC2, Docker*
- LEMP web application featuring Retrieval-Augmented Generation (RAG) Large Language Models, voice-recognition Go microservices, and a comprehensive data-backed user authentication system.

**Zenatria** | *Unity, C#, Git*
- Designed and developed Tower Defense game demo showcased at PAX East

## TECHNICAL SKILLS

**Languages**: C#, Python, JavaScript/TypeScript, C++, Shell/Bash Scripting, Lua
**Databases & Data Tools**: SQL, Relational Database Design, mongoDB, EntityFramework, SSMS, DataGrip, Tableau, Lowdb (JSON)
**Frameworks & Libraries**: .NET 8.0, React, Flask, Blazor, Redux, torch & torchvision, Jest, jQuery, openai, opencv, PIL, wtforms, mysql, llama_index, ZXing, jupyter, pandas, Bootstrap, Vosk, Express, SignalR
**Developer Tools**: Git (LFS, GitHub) Visual Studio, Cursor (VSCodeium), Jira, Unity, Cloudflare, Sentry, Trello, GitHub Copilot, Roblox Studio, CVAT, Inno Setup, Jenkins
**Cloud/Remote Platforms**: AWS / Amazon Web Services (EC2, EBS, Lightsail, S3), Google Cloud Run, Docker (Compose), WSL2
**Soft Skills**: Prompt Engineering, Agile, Scrum, CI/CD, Live Service development & debugging, Waterfall, Customer interaction
**Architectural Styles**: Monolithic, Microservices