Matthew Malzahn
Carrboro, NC
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Accomplished Software Engineer with deep expertise in C# and C++ development, specializing in building scalable, maintainable software solutions. Proven track record in optimizing performance, refactoring complex systems, and enhancing user interfaces using ASP.NET Core and Blazor. Skilled in mentoring developers, driving cross-functional collaboration, and delivering robust, future-proof applications.

Languages: C#, C++, SQL, JavaScript, HTML/CSS, Java
Tools: .NET Framework, ASP.NET Core, SQL Server, Blazor, Visual Studio, SSMS, VirtualBox, Hyper-V, Unreal Engine, Unity, BitBucket, GitHub, Jira

Professional Experience:

Software Engineer   **August 2021 to August 2024**
Invenco by GVR   Greensboro, NC

- ❖ Enhanced store metrics monitoring, enabling optimized pricing and timely promotions by developing an ASP.NET Core 6.0 service to automate database queries and deliver real-time sales data in JSON format to a customer endpoint.
- ❖ Resolved 20% of key UI issues in a critical management application using C# and Blazor, improving input box alignment and filtering, optimizing error messages, and reducing wait times for data processing and rendering. These enhancements clarified user interactions and made the interface more efficient and user-friendly.
- ❖ Refactored and deprecated 43,000 lines of outdated C++ code, integrating key functionality into a streamlined solution with less than 2,000 lines. This refactor improved build time, removed the need for specific network hardware, and simplified maintenance by consolidating the codebase.
- ❖ Mentored six developers through structured training, hands-on projects, and pair programming, enabling them to handle significant tasks within a week while ensuring smooth integration and boosting team productivity.

Software Engineer   **August 2020 to July 2021**
TEKSystems - Gilbarco Veeder-Root   Greensboro, NC

- ❖ Resolved critical defects in POS, fueling, and network subsystems, improving system performance and stability across thousands of retail sites. Addressed key issues in discount application and payment processing to ensure reliable transactions and enhance customer experience.
- ❖ Performed quarterly regression testing for major releases, covering 100-150 test cases over 2 weeks to ensure no data leaks of sensitive information, such as credit card numbers, maintaining compliance and system integrity.
- ❖ Rapidly developed C++ solutions to address 15 critical defects during regression testing to ensure accurate card data handling, correct transaction processing, and proper data cleanup. Delivered patches to keep testing on track, with fixes vital for business operations and compliance.

Projects:

Unreal Engine 5 Game Development

- ❖ Developed a series of 3D and 2D games using Unreal Engine with C++, showcasing a range of gameplay mechanics and design skills.
  - ➤ **First-Person Dungeon Crawl Game:** A first-person game where a player enters a dungeon, solves puzzles to reach the treasure room, and escapes with the treasure to win.
  - ➤ **2D Shooter Survival Game (Paper2D):** A top-down survival game where players must survive as long as possible against endless waves of enemies, aiming for a high score.

Education:

UNC - Greensboro - Greensboro, NC   May 2020
B.S. in Computer Science