GREGORY BRANDT
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PROFESSIONAL SUMMARY

Software Engineer and Marine Corps Veteran leveraging 7 years of experience in designing and developing robust software solutions, specializing in 3D data visualization, game development, and automation. Adept at leveraging languages such as Python, C++, and C# to build scalable applications and enhance user experiences. Proven track record of optimizing performance and ensuring high-quality code through rigorous testing and efficient data management. Strong collaborator with a history of successfully leading interdisciplinary teams and mentoring peers. Committed to driving innovation and improving processes through continuous learning and adaptation. Key skills include:

- 3D Data Visualization
- Game Development
- Performance Optimization
- Automation Tools
- User Experience Design
- Code Quality Assurance (QA)
- Cross-Platform Development
- Written/Verbal Communication
- Cross-Functional Collaboration

EDUCATION

Bachelor of Science, Computer Science | Bradley University

TECHNICAL COMPETENCIES

Software: Microsoft Office Suite 365 (Word, Excel, PowerPoint, Outlook) | GitHub
Operating Systems: Mac | Microsoft Windows | Linux
Programming & Game Development: C / C++ | C# | JavaScript / Typescript | Python | MySQL | Unity | Unreal

PROFESSIONAL EXPERIENCE

Matri, Inc | Remote **2021 – 2022, 2023 – Present**
Software Engineer

- Designed and developed software tools integral to a 3D data visualization pipeline using Python, C#, and TypeScript, increasing the efficiency of data rendering
- Streamlined the creation of 3D visualizations by developing a Python module that transitioned the process to an object-oriented paradigm, reducing onboarding time and decreasing visualization creation by 66%
- Created immersive 3D scenes by transforming data tables from PostgreSQL, enabling enhanced data analysis and visualization in Unity and ThreeJS
- Developed a GUI application that enabled non-technical users to easily participate in 3D data visualization processes, improving user engagement
- Integrated and enhanced system functionalities by interfacing with HTTP and REST APIs, contributing to a more robust and flexible software architecture
- Developed a VR Unity prototype for visualization software, offering stakeholders an innovative and interactive way to engage with complex data sets

Treyarch / Activision Blizzard | Irvine, CA **2022 – 2023**
Associate Engineer

- Enhanced gameplay mechanics and player engagement by implementing key features using C++, C#, Lua, Python, and a proprietary game engine, contributing to an increase in active player retention
- Designed and developed innovative multiplayer game modes using a proprietary scripting language, boosting competitive dynamics and increasing player retention
- Refactored game logic to be data-driven and exposed tunable settings in designer tools, enhancing design flexibility and improving the efficiency of the game design process
- Resolved gameplay bugs in a multi-project client-server environment, ensuring consistent player experiences and reducing reported issues
- Developed advanced gameplay features using Unreal Engine 5 (UE5) and C++.

Pursued B.S. in Computer Science at Bradley University **2017 – 2020**

United States Marine Corps | Various Locations **2013 – 2017**
Office Manager & Administrator, Personnel Records Office

- Managed, prioritized, and completed a full spectrum of administrative functions and tasks, including data entry, information management, mail distribution, call screening, and travel management expense reports
- Oversaw human resources, payroll, training, personnel record management, and established priorities, assigned and directed work to 15 employees while serving as principal administrator for all departmental functions
- Served as Subject Matter Expert of clerical procedures and systems such as Microsoft Word, Excel, PowerPoint, and Outlook, managing files, tracking tasks and projects (similar to Microsoft Project) and records
- Maintained company personnel files for 20,000 employees; provided professional development, mentoring, and training to all subordinates while meeting higher-echelon expectations

SOFTWARE DEVELOPMENT PROJECTS

Kiki's Cantina
A cozy sci-fi-themed game that blends farming, cooking, and automation mechanics, with optional stress-relief elements.

- Developed the game using Unity and C#, focusing on creating an engaging and seamless player experience
- Created a tool that dramatically reduced content creation time by 95%, enabling the efficient generation of complex game elements from simple textures
- Designed the game's architecture to be highly adaptable, allowing it to be easily modified for both 2D and 3D gameplay, providing flexibility for future updates and enhancements
- Implemented user-friendly design features, making it easier for non-technical team members to interact with the game's code and customize elements without needing in-depth programming knowledge
- Optimized game performance, ensuring smooth gameplay by reducing background processes and using efficient data management techniques
- Ensured the game's reliability and quality by implementing over 1,800 automated tests, catching potential issues early, and maintaining high standards

Graph Wars
A strategic Python-based version of the classic game Risk, where players compete by writing Python scripts.

- Developed a secure system to manage player actions, ensuring that scripts ran efficiently within set limits, making the game fair and balanced
- Created an intuitive interface that simplified the complex interactions of the game, allowing players to focus on strategy rather than technical details
- Built a server that supports multiple programming languages, broadening the game's accessibility and allowing players from different coding backgrounds to compete
- Developed a prototype Graph Neural Network model to enable automated learning and gameplay strategy
- optimization

A Cog in the Cosmic Machine
A narrative-driven 2D space game that combines turn-based strategy with real-time decision-making.

- Developed an audio management system that streamlined the sound design process, enhancing the game's atmosphere and player immersion
- Designed a dynamic event system that added depth to the game's story, allowing for varied player experiences based on their in-game choices
- Created a flexible mini-game system, enabling the team to easily add or remove mini-games that influenced the main game, keeping the gameplay fresh and engaging
- Collaborated with a diverse team of 20 professionals, ensuring effective communication and project progress
- Used agile methodologies and tools like Jira and GitHub to manage tasks and version control, ensuring the project stayed on track and was completed on time

PUBLICATIONS

Guidance is Good: The Impact on Enjoyment and Flow