

Matthew Mabrey

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Skills

Programming Languages: C#, C++, C, Python, Java, Groovy, Lua, PHP, SQL, HTML, CSS, JavaScript, TypeScript

Tools, Frameworks, & Engines: .NET, Jenkins, Github Actions, Docker, Artifactory, Git, Subversion, WPF, Unity, Unreal

Expertise: Artificial Intelligence, Automation, Continuous Integration, Game Development, Asynchronous Programming

Experience

World of Warcraft • Blizzard

Jan. 2022 - Present

Software Engineer, Mar. 2023

Associate Software Engineer, Jan. 2022

C#, C++, Java, SQL | .NET Framework, Microsoft Entity Framework, Jenkins, Grafana

- Implemented artificial intelligence for headless clients to test complex game features & systems using realistic player behavior.
- Developed, coordinated, and executed large scale automated testing to validate client & server performance.
- Enhanced Continuous Integration systems to improve reporting, testing, and build stability.
- Automated internal workflows to improve productivity and performance analysis.
- Doubled the system & process documentation on my team which significantly reduced on-boarding times for new engineers.
- Architected data schemas and data access layers to store and automate the validation of game data.
- Championed increased testing across the team by automating test suites and improving reliability & usability of test tools.
- Awarded top performance reviews for exceptional contributions to the team.

World of Warcraft • Blizzard

May - Aug. 2021

Software Engineer Intern

C#, SQL | .NET Framework, Microsoft Entity Framework, Grafana

- Implemented artificial intelligence to enable headless client game agents to prioritize and complete in-game objectives.
- Created automated regression tests to verify upcoming game content rewards.
- Designed a data schema to store & visualize large amounts of game data on a Grafana dashboard to help automate QA testing.

Green TCNJ Environmental App

Aug. 2020 - May 2021

Web App Developer

Typescript, HTML, CSS, PHP, SQL | Ionic, Angular, MySQL, MariaDB, Apache

- Created a cross platform mobile application for The College of New Jersey's environmental and recycling initiatives.
- Implemented the back-end functionality needed for recycling guidelines, environmental events, and relevant news.
- Worked on a small team to build a front-end mobile application and admin portal to display and manage database information.

Education

The College of New Jersey (TCNJ)

Dec. 2021

Bachelors of Science, Computer Science

- **Cumulative GPA:** 4.0/4.0
- **Honors:** Summa Cum Laude, TCNJ Computer Science Award, UPE Computing Honor Society, Dean's List All Semesters

Projects

AI Game Solving Agent

Mar. - May 2020

Python | NumPy, PyGame, Python Arcade Library, PyCharm

- Used Python to create a rational game solving agent for a 2D retro arcade game.
- Designed the agent to avoid obstacles and adversaries while collecting targets in as little time as possible.
- Engineered the only agent in the course to complete all 10 levels without losing any lives and achieving a near-optimal score.

Demolition Derby Game

Jun. 2019 - Aug. 2020

C# | Unity Engine, Microsoft Visual Studio, Photon Networking, Blender

- Fully implemented a 3D multiplayer video game in the Unity engine using a listening server model.
- Experimented with mechanics, physics, level design, and VFX to develop a fun and competitive last-person-standing car game.