Marlowe Johnson
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Detail-oriented Computer Science graduate with a secret clearance and a strong foundation in statistics, machine learning, and data analysis. Passionate about graphics programming. Proven ability to manage databases, automate reporting processes, and lead collaborative efforts within multidisciplinary teams to solve complex problems.

Education:

- ***Bachelor's of Science in Computer Science*** | University of Texas at Austin | 02/2019 - 05/2023| Relevant Coursework: Graphics, Database Management, Robotics, Software Engineering, Artificial Intelligence
- ***Post-Graduate Biblical and Ministry Training Program*** | Full-Time Training in Anaheim (FTTA) | 08/2023 - 06/2025| Relevant Coursework: Leadership, Communication, Conflict Resolution, Public Speaking, Audio Video Design

Technical Skills:

- **Programming:** C, C++, C#, Java
- **Scripting:** Python, Powershell, Javascript, PHP
- **Web Development**: React, HTML, Bootstrap, SASS
- **Operating Systems:** Unix/Linux, Windows
- **Technologies**: Boost, Git/SVN (Version Control), WPF, OpenCV, Docker
- **Services:** Microsoft Azure, Microsoft Suite (Excel Primarily), Visual Studio (2019, 2022)
- **Database:** T-SQL, Microsoft Access, PostgreSQL
- **Testing**: Selenium

Professional Experience:

Computer Scientist Intern (GS-4) | Air Force Personnel Center, Directorate for Personnel Operations (AFPC, DP2ZK) | 07/2021 - 07/2023

- Managed a secure personnel database using Microsoft Access, ensuring data integrity and compliance with Air Force privacy policies.
- Designed and executed complex SQL queries for data retrieval and analytical reports used by decision-makers.
- Optimized database structures, improved system functionality, and enhanced accessibility for analytics.
- Developed automated reporting solutions using Powershell to streamline operations and reduce processing time.
- Collaborated with Air Force and IT teams to implement custom functionality tailored to operational needs.

Relevant Projects:

- Autonomous driving (Team)
  - Implemented a ROS-based navigation system in C++ combining global A* path planning with local obstacle avoidance. Features lattice grid construction, collision detection, arc evaluation, and odometry updates. Publishes drive commands and visualization data, enabling a robot to plan efficient routes, avoid obstacles in real time, and navigate 2D environments.
- Ray Tracer (Team)
  - Implemented a CPU ray tracer in **C++**, featuring recursive ray casting, shading (Phong / physically based), reflections/refractions, texture mapping, anti-aliasing, and bounding-volume hierarchies for acceleration. Built a scene loader, image output (PPM/PNG), and performance optimizations including multithreading and memory management.
- City Scoop (Team)
  - Developed a full-stack IMDB-style web app using Python (Flask, SQLAlchemy), JavaScript (React), and SQL databases. Built RESTful APIs, implemented search/filter features, and integrated external media. Utilized Docker, Bootstrap, Selenium, and GitLab CI/CD for testing and deployment, collaborating on design, API documentation, and scalable database queries.