Ryan Lawlor

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Education

Franklin & Marshall College — Lancaster, PA

Bachelor of Arts, Cum Laude, 3.61 GPA — *August 2018 – May 2022*

Double Major in Computer Science and Business

Relevant Coursework

Data Structures, Algorithms, Operating Systems, Computer Organization, Human-Computer Interaction

Experience

Lockheed Martin — February 2023 – Present

Software Engineer — *Moorestown, NJ*

- Developed and optimized a multithreaded C++-17 codebase for a Linux-based solid-state radar system, utilizing modern C++ features (smart pointers, lambdas, STL containers, threading libraries) and CMake for build/dependency management, resulting in higher performance and reliability.
- Implemented robust network communication using C++ sockets and the POCO library, and created Python/Bash automation scripts that cut manual effort by ∼20% and standardized deployment pipelines.
- Built a comprehensive unit-test suite with Google Test (including exception handling and mocking) achieving ∼70% coverage; integrated tests into Jenkins for continuous integration/continuous delivery (CI/CD).
- Collaborated with a cross-functional team of 10+ engineers and maintained clear customer communication, ensuring timely delivery of critical radar components and adherence to quality standards.

Comcast — June 2021 – August 2021

Software Architect Intern — *Remote*

- Designed and delivered a full-stack DevOps platform as a part of the Comcast Enablement and TPX teams that automated internal software requests, featuring a React/Material-UI front-end for real-time service status dashboards and a Go-based back-end deployed on Kubernetes/AWS for high-scale reliability.
- Collaborated with an agile team of 5–8 engineers using Scrum/Kanban processes, managing the full software lifecycle with Git/GitHub through pull-request reviews, continuous deployments, and engineering best practices to consistently deliver 100% of tickets on schedule.

Franklin & Marshall College — January 2022 – April 2022

Artificial Intelligence Research Assistant — *Lancaster, PA*

- Researched and implemented visual-reasoning pipelines in PyTorch, studying Faster RCNN concepts with the OpenAI CLIP model for object detection and localization within images.

Projects

Automated Teamfight Tactics Game Bot | *Python, OCR, Riot Games LCU API, Git*

- Developed an object-oriented Python program that automatically plays auto-chess style game Teamfight Tactics
- Utilizes Optical Character Recognition and the Riot Games League Client Update API to handle in-game object detection, successfully collecting and arranging a viable team composition to effectively compete
- Working on implementing computer vision object detection to actively monitor character position and team composition for more reliable decision making and successful team compositions

Teamfight Tactics Community Discord Server Bot | *Python, Riot Games API, Git*

- Created a Python discord bot hosted on my Raspberry Pi that automatically tracks TFT player matches
- Interfaced through discord commands in server text channels, the bot responds to commands from users with embeded messages displaying community leaderboard rankings, player and match statistics, and game insights
- Continuously updates all match and player data to a local JSON database through Riot API calls, providing fast and reliant message responses when a user requests one of multiple discord commands

Skills and Honors

Languages: C++, Python, Java, Bash, JavaScript, HTML, CSS, SCSS, R, SAS
Frameworks/Libraries: React, Material-UI, PyTorch, TensorFlow, pandas, NumPy, Matplotlib
Developer Tools: Git, Linux, Google Cloud Platform, VS Code, PyCharm, IntelliJ, vim, CMake/Make, Google Test
Productivity: Atlassian Tool Suite (Jira, Bitbucket, Confluence, Crucible), GitLab, GitHub, Agile (SCRUM), CI/CD
Awards: Eagle Scout, Franklin & Marshall Dean's List, Council Rock Distinguished Honor Roll
Active Security Clearance: Level: Secret, Lockheed Martin, February 2023 - Present