Joshua Luckie

luckiejoshu@gmail.com | NJ

Summary

Highly motivated engineer with one year of exceptional experience at Lockheed Martin, showcasing substantial growth in coding and software development. Proficient with a love for multiple programming languages, I have actively contributed to the development of cutting-edge software solutions, optimizing performance and enhancing operational efficiency. Skilled in problem-solving and collaboration with cross-functional teams, I am dedicated to continuous improvement and innovation. Consistent in challenging myself, I am looking to find an environment that will allow myself to grow professionally while contributing to innovative solutions. I am passionate about being able to express the creative solutions that coding allows, and am enthusiastic about the prospect of joining a team that values creativity, collaboration, and continuous learning.

Coding Skills

- **Python**
  - Proficient in optimization using cProfile
  - Basic understanding of modern machine learning concepts and their implementation in Python using **PyTorch** and **Scikit learn**
  - Knowledgeable in different architecture implementations in Python with and without libraries (the **Plugin architecture** Pluggy uses, state machine implementation)
  - Proficient in configuring and leveraging **CI/CD** pipelines with **Pytest** and **unit test**
  - Adept at creating **CI/CD** pipelines for asynchronous applications using **Serenity** (as well as **requests** library for when there is no tty present
  - Knowledgeable in different environmental set up tools for Python, ie: pip, hatch/hatchling, setup.py
  - Adept at creating proficient queries with common postgresql database syntax
- **C**
  - Knowledgeable of the standard **autotools** workflow in order to create C applications on a wide variety of systems and cpu architectures
  - Adept at implementing common data structures in C
  - Proficient in configuring **thread pools** for specific tasks using pThreads
- **Shells(Bash,Zsh,Csh)**
  - Vast knowledge of how PIDs are viewed on the **univa grid engine**
  - Proficient in creating profiling tools using linux commands to create a human readable format for results
  - Adept knowledge of background processes, detached and attached, and their inner workings with signal processing and the cpu queue/mask
  - Knowledgeable in command line awk, sed, jq, and other common linux commands in order to create common pipelines on the terminal
- **Javascript**
  - Knowledgeable in function solutions in Javascript for **filtering** of tables or data on an html page on events
  - Adept at creating Javascript between pages, or popups
- **Perl**
  - Extensive knowledge of Perl **Regex** capability
  - Adept at creating classes in Perl that allow for parsable types from different files
  - Knowledge of Perl on the command line in order to create quick scripts and parsers (for instance, reading yaml)
- **Rust**
  - Solid foundation of Rust's borrow-checker system
  - Proficient in creating small environmental scripts and shells using Rust's simple data structures and functions
  - Adept at implementing some data structures in Rust Structs like a **binary** tree
- **Go**
  - Proficient in creating tests for go projects
  - Adept at string parsing in Go in order to create a **Pratt parser**
- **Git**
  - Knowledgeable in **Github workflows** in order to create productive **CI/CD** pipelines
  - Adept at working in both **Git merge** workflow or a **Git rebase** workflow

Experience

Lockheed Martin - Rotary Mission Systems, Moorestown, NJ

Associate Member Engineering Staff *Dec. 12 2022 - March 3rd 2024*

Member Engineering Staff *March 3rd 2024 - ongoing*

- Utilize modeling & simulation to perform mission analysis, concept exploration, and feasibility analysis in order to determine system level impacts of design implementations of Aegis element simulations.
- Delivered engaging and informative presentations on technical topics to both internal and external audiences.
- Effectively led small, interdisciplinary teams in software development and data science analysis projects, gathering collective expertise and merging it with my own knowledge to achieve common goals and drive successful project outcomes.
- Utilized Jira project management software to meticulously plan and create a comprehensive timeline for the overhaul of a critical multi-baseline coding project, showcasing proficiency in Agile project management methodologies and software tools.
- Implemented machine learning procedures in Python to automate a process saving 100s of hours every 4-5 sprints
- Re-architectured multi-program production level code for protection from specific tech debt allowing for 100s of hours to be saved (and future crashes to be prevented)
- Created a simple lightweight shell in Rust, allowing for more efficient movement around the file system when resources were low
- Designed and implemented comprehensive CI/CD pipelines in Python using the Pytest framework in Jenkins, allowing for automated testing to find bugs as well as supporting Git branch workflows
- Created efficient queries for vast amounts of data using Pandas and NumPy, allowing for fast processing of multiple different files and folders in a fast and quick manner
- Used Serenity in Python to create automated testing services for asynchronous procedures, allowing for a continuous testing environment on user based products
- Developed and optimized GDB scripts for C++ applications, creating a consistent debug log to send to developers
- Implemented simple case-insensitive filters for jinja2 html pages using Javascript and Python, allowing for faster and more efficient analysis from analysts
- Helped create a reverse-weighted heatmap for inter-personal presentations in Matlab, which allowed for a clear and concise message during the presentations
- Implemented GNU's parallel in Bash, allowing for faster processing of shell pipelines and commands
- Created a profiler for jobs on a Univa Grid Engine using Python and Zsh, allowing the queue manager to request correct resources for the jobs tasked
- Implemented a monitoring script in Bash, which watched a mounted file and switched over the user's job to another given specific conditions, saving 10,000 hours upon implementation
- Implemented common Git hooks for Python repositories, allowing for consistent linting and automated tests between all new and current repositories

Personal Projects

Projects I have completed in order to learn more about the internal workings of machine learning concepts, language compilers, asynchronous messaging systems, and environment management

- String Similarity
  - **Python:** Leveraged Python's data structures and algorithms to efficiently compute the Jaccard similarity coefficient between sets of words, providing insights into sentence similarity.
- Discord Bots
  - **Python:** Contributed to an open-source discord bot project, leveraging a wide array of established libraries and crafting custom extensions to enhance functionality and user experience. Created CI/CD using github workflows.
- Web Requests
  - **Python**: Created a serenity based downloader, using JSONs as configuration files, in order to version control mod packs by dates and versions of mods

Skills

- Proficient in the use of **Jira** in creating epics, stories, and themes to deliver quality products in an **Agile** workflow
- Adept at combining **Confluence** with **JQuery Javascript** in order to have code be a direct part of the confluence page

Education

Ursinus College **May 2021**

Bachelors of Science in Physics

Awards and Hobbies

- **Awards:** Award of Excellence for impact in support of the SRR program milestone
- **Hobbies:** Jazz trumpet player, coding in esoteric languages, reading