Alexander Feather

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Senior Software Developer with experience working closely with end users to design and develop complex systems of applications using the best technology for the task.

- Team leader that enjoys learning new things and mentoring others on concepts that may be unfamiliar to them in order to improve the overall quality of the project.

- Experience in many different fields including web and socket based services, single user desktop applications, multi-application interfaces and low level hardware programming.

- Participated in complete life-cycle development for multiple projects including generating requirements, designing architecture, developing applications, testing functionality and writing documentation.

Technical Skills

Languages:	Python, Bash, C#, ASP.NET, Java, PHP, React, JavaScript, Visual Basic, PowerShell, VBScript
Databases:	Oracle SQL, MySQL, PostgreSQL, Microsoft SQL, Microsoft Access
Tools:	Atlassian Collaboration Software, GitLab, Git, Apache Subversion, Jenkins, Oracle Mid-Tier Products, VMWare vCenter with vSphere, Docker, Ansible, WordPress CMS, LaTeX

Work Experience

2023 - Present

Senior Software Developer for Jacobs (NASA Contract), Kennedy Space Center FL

Lead a team that was responsible for designing, developing and supporting a suite of Python applications to manipulate telemetry data in order to emulate the Artemis rocket.

Developed and implemented a frame based load balancing for sending UDP messages at a consistent specified rate to better distribute the messages.

Reworked and improved a Python module that generated Chapter10 Telemetry data in order to be more accurate and efficient.

Developed multiple Python and Bash scripts to automate troubleshooting and collect data on reported issues as well as training others on how to use them effectively.

Built and deployed virtual machine templates and docker images with pre-configured software and multiple networking configurations.

Developed Ansible playbooks to perform application and networking tasks on multiple virtual machines as well as a React interface to allow the operations team to easily and intuitively manage multiple instances of the applications.

Responsible for managing a GitLab instance on Docker and the corresponding CI/CD runners which was used by multiple teams.

2019 - 2023

Principal Software Engineer for Northrop Grumman, Melbourne FL

Developed Python scripts to verify the Stores Management System behaves as described in the requirements and helped to debug issues as they were discovered.

Created Python and Bash utilities to configure the system in order to make testing more consistent and repeatable, as well as incorporated them into the build process to make them available to multiple teams.

Created utilities that allow test scripts to communicate with the system through MIL-STD-1760 signals on both simulated environments and physical relays and devices.

Responsible for updating and configuring the Subsystem tests to run on hardware, identifying issues and training other team members about the best design patterns for writing tests that would perform as expected in both simulated and physical environments.

Designed and implemented a test framework for the Store Emulator in order to verify the behavior described by the Universal Armament Interface ICD. Also responsible for developing tests and debugging issues as functionality was implemented as well as setting up the test suite to run periodically in Bamboo.

Created a MiDEF parser using MIL-STD-3014 in C# in order to both encode and decode data that was then incorporated into other applications.

Subject Matter Expert for multiple areas as well as being responsible for training new hires and other developers in order to promote knowledge sharing.

| 2015 - 2019 | **Programmer Analyst for DXC (Bath Iron Works Account), Bath ME** |

Technical Lead for the Work Authorization Implementation which used an Oracle SQL database to query multiple sources for charging information, validate which charges should be sent to the Time Accounting System and then send updates to the system in almost real time. This was a major success as the old implementation would process only a couple hundred thousand records in an overnight batch process whereas the new implementation was processing almost two million records every fifteen minutes.

Technical Lead for the Tool Management and Learning Management Integration which required creating a Java Web Service that would query the Learning Management System to verify the corresponding training had been completed before sending a response back to the Tool Management System that would allow the user to receive the requested tools.

Technical Lead for the Learning Management Implementation which required vetting products from different vendors based on the functionality required by the shipyard, creating interfaces to keep the system up to date with active employees, creating logical representations of existing training certifications in the new system and finally transferring current and historical completed training from the old system to the new system without losing any information in order to guarantee the accuracy of each employees training.

Technical Lead for the Finance System Database Migration which required updating, testing and documenting close to fifty legacy applications written in SQL, Visual Basic, Windows Batch and Java to prove to the customer there would be no interruption to production during the migration.

| 2014 - 2015 | **Application Developer for Fujifilm, Bedford MA** |

Contract position to create the Dternity Deep Archive Portal which allowed customers to manage stored physical backups through a web application written in ASP.NET and queried a Microsoft SQL database in order to view files stored in backups as well as create requests to retrieve backed up files.

Python and Bash scripts were used to create customer accounts with their own partitioned FTP server that was linked to their web portal login as well as update the Microsoft SQL database with the files stored in each physical backup received from the customer.

Created an ASP.NET application that would generate a name tag and automatically send the image to an external printer using device drivers in order to identify visitors.

Education

| 2011 - 2014 | **BS Computer Science, Loughborough University, England** |

Final Year Project was titled "The Implementation and Optimization of the SHA2 and SHA3 Hashing Algorithms" which involved implementing the algorithms in Java.