Alexander Feather

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Professional 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

High Level Languages:	Java, Python, PHP, Visual Basic, C# and ASP.NET.
Scripting Languages:	Bash, Batch, PowerShell, VBScript, JavaScript, React, JQuery, HTML and CSS.
Databases:	Microsoft SQL, Oracle SQL, MySQL, PostgreSQL, and Microsoft Access.
Tools:	GitLab, Jira, Bamboo, Confluence, Fisheye, BitBucket, Jenkins, Git, Apache Subversion, Oracle Mid-Tier Products and WordPress CMS.

Work Experience

2023 - Present

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

Lead for a team that was responsible for designing, developing and supporting a suite of Python Applications to manage telemetry data generated by an emulated rocket stack in order to support the Artemis missions as well as the hardware required to run the software.

Developed and implemented a deterministic frame based load balancing Python module for updating and sending UDP messages at a specified rate from multiple threads in order to improve performance and reduce timeouts in the receiving system.

Created Python and Bash scripts to perform a number of automated tasks that were then used by the Operations team in order to support the customer.

Worked closely with end users to resolve issues as well as implement requested features as well as creating and maintaining accompanying LaTeXdocumentation.

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 in both simulated and physical environments. This required working closely with electrical engineers to understand the hardware connections as well as using lower level interfaces to manipulate these signals on hardware from the test scripts.

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.

Created Python objects to emulate different aircraft systems in order to test functionality that relied on these systems.

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 an automated environment.

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.

Responsible for training an intern about best practices for development as well as how to properly resolve issues as they were reported by the customer.

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 portal.

The web portal was 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.