Victor A Medina

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SKILLS

Languages: Python, SQL, HTML,CSS,JavaScript

Tools: Git, AWS, CI/CD, MySQL,Neo4J,Jira,Scrum, Agile

Frameworks and Libraries: Django, Pandas, Numpy

Operating Systems: Windows, Linux

WORK EXPERIENCE

Boeing, Long Beach CA

Full Stack Software Engineer; Product Standards Digital Enterprise — *12/2021 - 09/2022*
- Maintained legacy codebase and developed customer change requests for over 12 applications with varying tech stacks such as Perl, Python, XML, Oracle DB and Java
- Collaborated with developers/architects to implement migration of existing applications from on premise to a cloud architecture using AWS
- Utilized knowledge in data structures and algorithms to refactor existing code resulting in over 90% time savings
- Created technical documentation for legacy applications to enable technical success for future developers

Senior Software Engineer; Propulsion *Systems Division* — *01/2019 - 12/2021*
- Created a web application utilizing Django Framework backed by MySQL and HTML/CSS/JavaScript which tracks engineering artifacts located in various servers/websites which significantly improved engineers ability to reference other engineering documents and significantly reduce rework
- Developed an API to easily allow transfer records from outdated Microsoft access database saving over 2,000 man hours when compared to manual entry
- Created a dashboard utilizing Pandas and Plotly with service request key analytics to help inform the team on best future structural repair manual initiatives and drive design improvements
- Created GIT standard practices for FEM development through airplane programs reducing FEM development by 75%
- Utilized Gitlab CI/CD pipeline to create finite element pre/post checks that will automatically test finite element models commits for checks typically done manually thus significantly reducing manual workload by over 80%
- Lead of the SoCal Propulsion site introducing tools and processes to the regional site

Structural Analysis Engineer; *Propulsion Systems Division* — *08/2015 - 12/2021*
- Utilized Pandas/Numpy to assist in the creation of metallic acreage checks that will automate structural analysis typically done manually thus allowing for less errors and rework
- Created a data pipeline stress analysis summary template utilizing python data analytics tools (Pandas, Numpy) and visualization tools (Seaborn, Plotly) that gives end users insight on critical areas of analyzed parts as well as analysis trends
- Created technical documents that communicates analysis results to project teams, project managers and customers
- Utilized Python's data analytic packages (Pandas, Numpy) to quickly determine element load trends between different load cases reducing man hours by 75% versus manually importing data through excel
- Created a script that would transform data from various case studies and automatically create respective run files to efficiently determine potential design space reducing manual work by 25%

LEADERSHIP

Lead Structural Analysis Engineer; Auxiliary Power Systems Development, Boeing — *05/2019 - 02/2020*
- Lead Structural Analysis Engineer for the APU system development team for NMA involving several suppliers/teaming partners, and require frequent customer interface
- Lead development, integration and documentation of structural requirements to establish the system design
- Guided product design and verified structural integrity by using and developing analytical methods, finite element models/simulations and other analysis tools with Python throughout the product lifecycle to develop the structural environment, characteristics and performance
- Integrated a GIT process for Finite Element Models and CI for typical FEM checks that have now been automated for quicker FEM development reducing the need for FEM rework and manual checks saving over 80% man hours when compared to traditional methods
- Developed analytical processes/tools using Python to improve effectiveness, quality and efficiency of the development effort.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
Master of Science in Mechanical Engineering, GPA: 3.83/4.0 — *May 2015*
Bachelor of Science in Mechanical Engineering, GPA: 3.37/4.0 — *May 2014*

University of Washington
Certificate, Python Programming — *January 2020*

Amazon Web Services — *June 2022*
AWS Certified Solutions Architect- Associate