Mariane Mendes Medeiros

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I am a Computer Engineer with master's degree in Computational Mechanics Engineering. As student, I have worked for 5 years in Scientific Initiation projects concerning computer sciences, robotics and automation. In my professional experience, I have worked for 9 years sharing the roles of Software Solution Architect / Software Developer of 'Digital Solutions for Engineering and Manufacturing' department.

While waiting for the next work opportunity, I am dedicated full time to refresh/learn new skills, focusing mainly (but not only) in courses of Cloud Computing (more specifically AWS), Containerization, DevOps culture/tools, and Software Architecture (last two courses with estimation of closure in May this year).

I am a person with good communication skills, strong aptitude for details and continuous curiosity and will to learn, loving to research and exchange knowledge with colleagues. In my former working team, I used to be the person designated for the tasks where no internal knowledge was available, due to my analytical skills and interest in learning new things. At same time that this posed a constant challenge due to short time spans to learn and solve problems, it made me a hands-on person, needing few directions to perform my tasks and deliver results.

Work Experience



Software Solution Architect / Software Developer

EMBRAER S.A. - Digital Solutions for Engineering and Manufacturing Department June 2011 - July 2020

Top Project: Integration of Manufacturing Process Planning software to Shop Floor Manufacturing Execution System and ERP (2011 – 2013)

• Took part as product owner and administrator of Manufacturing 3D Process Planning system. Played role in specification of integrations, conciliating requirements of four different teams: product / manufacturing / quality engineers and operation technicians. Developed code to customize the Manufacturing 3D Process Planning system. Assumed ownership of main architectural components of integration, supporting production operation and users.

Main responsibilities in deployment of 3D Digital Manufacturing solutions for Aerospace Industry:

- · Understand business needs and optimization opportunities regarding digital solutions, leveraging higher levels of system automation inside the company while following industry standards for 3D technologies (mostly Dassault Systèmes) and aircraft lifecycle regulations;
- Collect functional requirements from engineers in respect of the business needs, conciliating their requirements to the ones of other areas such as Shop Floor Operation;
- · Define computer-based solutions to solve engineering needs, delivering studies of viability and risk analysis for possible software solutions;
- Assess market solutions evaluating technical aspects for internalization of 3rd-party software into company's working environment ensuring it fits company's needs;

- Define integration strategies of 3rd-party software to the company's applications and software/hardware infrastructure, in partnership with Embraer's IT team;
- Create software specification and define quality assurance plans for deliveries;
- Define strategies to support end-users (training, ticket attendance, support's knowledge base management).

Main responsibilities in software development:

- Liaise process definition and software development teams;
- Establish planning and prioritization of activities for development team, reporting progress to managers;
- · Ensure team's strong orientation to aerospace industry requirements for software development (aircraft data integrity, traceability, lifecycle management);
- Develop software (VBScript / VBA, C++) and 3rd-party software customization (VBScript / VBA);
- Maintain software developed by others (Python, C#);
- Ensure best programming practices and code quality, with strong orientation to data integrity and performance;
- Define and develop interfaces for system integration, planning strategies to improve downstream data flow;
- Ensure synergy of developed systems with the current software/hardware infrastructure, considering data security policies and company's compliance regulations;
- Provide testing plans, maintenance procedures and lifecycle strategies for software/customizations;
- Provide low- and high-level documentation as Technical Writer;
- Provide training and support for end users.

Education



Universidade Estadual de Campinas

(2010 - 2013) Master's Degree, Mechanical Engineering - Computational Mechanics Department

Final Paper: "Simultaneous optimization of structure and controller to vibration minimization via Genetic Algorithms" (http://repositorio.unicamp.br/jspui/handle/REPOSIP/264939). Description: The work presents an optimization method where a beam structure and the controller parameters are optimized simultaneously aiming to diminish negative influence between both dynamics (two other optimization approaches are presented by means of comparison). For all three cases, the optimization problem was addressed using Genetic Algorithms and the results were simulated through MATLAB programming.



FURG Universidade Federal do Rio Grande

(2005 – 2009) Bachelor's degree, Computer Engineering

Final paper: "Graphical Interface for Dynamic Systems Study". Description: The work broaches the development of graphic interfaces to study dynamical systems and basic concepts of control theory. Designed to be used as didactic tool, the C++/MATLAB software prototype exploits the required characteristics to waken the student's interest in the subject, offering the possibility to accomplish some simple dynamical simulations.

Top Project: "Multi-robot architecture for dynamic system applications (FURGBOL robot's soccer team)". Description: Development of an architecture for autonomous low-cost robots capable of cooperate and play soccer (F180 category - Robocup.Org). Contribution to the project: research/development on computer vision techniques (C++).

Academic production: http://lattes.cnpq.br/7272241501780235

Main subjects of the program: Theory of Computation, Computer Architecture, Software Engineering, Programming Languages, Data Structures, Operating Systems, Computer Networking, Databases, Compilers, Analysis of Algorithms, Computer Graphics, Numerical Methods, Artificial Intelligence, Robotics.

FURG Universidade Federal do Rio Grande - Colégio Técnico Industrial Prof Mário Alquati

(2000 – 2002) Technical Education in Software Development

Main subjects of the program: Programming Techniques, Data Structures, Software Engineering, Operating Systems, Statistics. Exposure to intensive logical thinking and practical code programming during entire program.

Courses



Cloud Treinamentos - AWS Cloud (160h)

September 2020 – December 2020

Introduction to AWS Cloud (10h) • AWS High Availability Bootcamp (10h) • AWS Backup Deviceless (10h) • AWS Cloud Experience (10h) • AWS Specialization Program (120h)

AWS Infrastructure Overview. High availability concepts. Theory and hands-on over services such as (but not only) VPC, EC2, S3, RDS, IAM, Route53, CloudFront, CloudFormation, Code Commit/Deploy/Build, SNS, SES, Lambda, CloudWatch.

Cloud Treinamentos - DevOps Specialization Program (120h)

November 2020 – CURRENT (closure estimated to May 2021)

DevOps culture and tools, such as Docker, Jenkins, Zabbix, Grafana, Nexus, Ansible, Terraform, Kubernetes and AWS ECS / ECR / EKS.

Instituto de Gestão em Tecnologia da Informação - Software Architecture Bootcamp (148h)

February 2021 - May 2021

Fundamentals. Architectural requirements. Design Patterns and architectural standards. Main software architectures.

Skills

Strong analytical thinking • Aptitude for details • Hands-on • Communication • Organization • Will for continuous learning ••• Software development life cycle • GIT • VBA / VBScript • C++ • Basic Python • RDBMS and SQL (MySQL, SQLServer, PostgreSQL, Oracle) • Batch / PowerShell scripting • Code optimization • Code debugging • AWS Services • Docker (Compose, Swarm) • Atlassian ALM tools (JIRA, Confluence) ••• Scrum framework • Lean Tools • Troubleshooting • Documentation

<u>Languages</u>

Portuguese: native proficiency English: full professional proficiency

Spanish: limited professional proficiency (can read, can sometimes listen, cannot speak)