

Bishikh Pal

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Professional Summary

- Over 6 years of progressively responsible experience in development, testing, documentation and production support for various applications like web and client server applications in .NET, Python and Java. Looking to join a highly-regarded software firm in role leading proactive, dedicated teams
- Experience in SDLC, Agile (SCRUM), Iterative, Waterfall methodologies and Object Oriented Application Design and Programming.
- Strong experience in Spring framework modules such as Spring MVC, IOC, Spring Boot, Spring microservices, Spring REST, Spring Eureka, Spring Ribbon, Spring Netflix, Spring Zuul, Spring Security.
- Hands on experience in UI framework like JQuery, Javascript, ReactJs
- Experience in XML related technologies like XSL, XSLT, XPATH
- Expertise in microservices to communicate through HTTP protocol
- Experienced in Middleware persistence frameworks like Hibernate/JPA entities for mapping Java classes using Hibernate query language and projections
- Extensive experience in object relational mapping using Hibernate
- Good experience with core concepts like serialization and file handling
- Experienced in implementing the service oriented architecture and web services using RESTFUL
- Strong experience in Perl and Python scripting
- Worked with various control systems like GIT and SVN
- Experience with CI-CD in .NET as well as Java applications- Maven, Ms-Build, Jenkins, GitHub, Sonarqube and Artifactory
- Experience with Docker Containers, leveraging Linux Containers and AMI's to create Docker Images/containers and Kubernetes.

Technical Skills

- **Languages:** C#.NET, Python, Java, XML, SQL
- **Frameworks:** .NET framework, .NET core, Spring
- **Web Technologies:** ReactJs, HTML, CSS
- **Database:** PostgreSQL, MongoDB
- **Testing Frameworks:** Ranorex, Python unit testing framework
- **Tools:** Jenkins, Rest Client UI, Postman, NX, MatLab
- **Web Services:** REST, Microservices
- **Operating Systems:** Windows, Linux
- **Web/App-Servers:** JBoss 6.0, Tomcat
- **IDEs:** Spring Tools Suite, IntelliJ, Visual studio, VS code
- **Methodologies:** Waterfall Model, Iterative, Agile, SDLC.
- **Version Control Systems:** SVN, GitHub, SubVersion
- **Build Tools:** MsBuild, Maven, JENKINS.
- **Markup Languages:** HTML5, CSS3, XML, XSLT.

Work History

Senior Consultant, Mercedes Benz and Research Development India Apr 2019- till date
Senior Software Engineer, Intelizign Engineering Services Pvt Ltd May 2018– Mar 2019
Senior Software Engineer, Cyient Limited April 2017 – May 2018
Software Engineer, Cyient Limited October 2014 – March 2017

Responsibilities

- Involved in Requirements gathering, analysis, design, development, testing and maintenance phases
- Estimated work hours and tracked progress using Agile/SCRUM methodology.
- Collaborated with clients from concept through final delivery of product or service.
- Used Spring framework to inject services, entity services, transaction management, and concerns by factory class corresponding to the use case operation executing
- Used Spring Core Annotations for Dependency Injection Spring DI and Spring MVC for REST API's and Spring Boot for micro-services.
- Reviewed code and corrected errors.
- Designed and developed forward-thinking systems that meet user needs and improve productivity.
- Performed all testing and troubleshooting methods and documented resolutions in the system.
- Worked closely with other departmental peers to develop high availability solutions for mission-critical applications.
- Created proofs of concept for innovative new solutions.
- Experience in Python Development with knowledge of Python web frameworks such as Django and Flask.
- Involved in CICD process using GIT, Jenkins job creation, Maven build and publish, and Fabric
- Trained and mentored junior developers and engineers.
- Provided documentation on start-up, shut down and first level troubleshooting of processes to users.
- Worked closely with customers to efficiently resolve issues.
- Mentoring Junior developers as well as creating environment of collaboration among other peer developers

Projects

Project #1 – Harness Content Checker: Jan 2020 to till date

Client: Daimler AG

Team size: one

Technology: Java with spring boot, React, Docker and Kubernetes

Role: Developer

Project description:

- This web application is used to automate quality checks performed by the supplier manually
- The application is able to fetch the data from one of the CAD database using REST API's
- Suppliers will also be able to upload the corrected file through the application
- Docker containerization is used to create images for the application
- With the help of Kubernetes, deployment is done in the hybrid cloud

Project #2 – Product Data Agent: June 2020 to till date

Client: Daimler AG

Team size: one

Technology: C#, JTOPEN, XSLT & CATIA

Role: Developer

Project description:

- This desktop application is used to convert files from one data base to another which is prevalent in their production plant
- Maintaining various configuration files to preprocess the files from one system to another
- JTOPEN automation is used to clean and merge JT's
- Theorem is used to convert JT to CGR's using batch commands

Project #3 – CI-CD Implementation for .Net Projects: Jan 2020 to till date

Client: Daimler AG

Team size: one

Technology: Groovy, Jenkins, Git, SonarQube, Ranorex, Artifactory, PowerShell

Role: Developer

Project description:

- Groovy scripts are created to automate the CI-CD implementation for nearly 400 tools developed basically on .NET framework
- Scripts are created to start Jenkins server based on Web-hooks or Poll-SCM
- SonarQube analysis is performed on the solutions to get the real time scan analysis as well as send the scan information to corresponding developer for quick reference
- Ranorex is used to automate the GUI tests in the CI-CD pipeline
- Finally, Artifactory is used to store the final executable and send the mail to the corresponding product owner for the information

Project #4 – NX Relication Mechanism: Mar 2020 to till date

Client: Daimler AG

Team size: one

Technology: PowerShell

Role: Developer

Project description:

- Previous to this application, NX used to open from the server and hence lot of performance issues
- This tool is rolled out to sync the application from the server to the local and hence improving the performance
- Also, there is auto trigger mechanism using task scheduler which will sync the local if there are any changes/modifications in the server
- After this application, NX will be referring to the local directories for opening the application. Hence improving the performance; since all started work from home because of the current pandemic condition

Project #5 – Automatic Release Management using Python: Mar 2020 to till date

Client: Daimler AG

Team size: one

Technology: Perl, Python, PowerShell

Role: Developer

Project description:

- Migrated the whole project from Perl & PowerShell to Python
- This standalone application is able to pull the repositories from Git, build the solutions using MS Build, scan the code using Sonar as well as finally uploading the executables to the Artifactory
- Application is able to handle the automatic release to Artifactory for nearly 400 tools

Project #6 – Ranorex Automation: May 2019 to Dec 2019

Client: Daimler AG

Team size: Four

Technology: C# & Ranorex Scripting

Framework: .Net

Role: Developer

Project description:

- As NX is one of the famous CAD software, we are looking for the tool which can automate the CAD operation
- We investigated lot of tools/software, finally we started exploring Ranorex which is capable of doing GUI automation
- We created scripts for almost 50 tools and finally we are able to integrate in the CI-CD pipeline
- Also, we created the bridge mechanism between the NX and Ranorex so that Ranorex is able to understand the NX and perform all the geometric operations using NXOPEN API's

Project #7 – Seam Tool: Oct 2019 to Mar 2019

Client: Daimler AG

Team size: one

Technology: C#, NX Open & XML

Framework: .Net

Role: Developer

Project description:

- Application is used to create Seam in interiors of Mercedes Benz cars.

- Tool is capable of editing, modifying and deleting the seam from the interior of cars
- Tool received appreciation and was also presented in the Daimler International Expo-2019

Project #8 – StartPart Configurator: Oct 2019 to Mar 2019

Client: Daimler AG

Team size: 1

Technology: C#, XML & Windows Form Application

Framework: .Net

Role: Developer

Project description:

- Tool is created to open NX based on the configurations set by user in UI
- Tool is used by approximately 12000 people from Mercedes Benz cars, trucks as well as vans To open NX in their domain like BIW, Powertrain etc.
- Application is maintaining few xml files as well as config file to populate the UI controls
- Tool is also creating some setting files so that when NX loads; it will take the following settings and open the NX

Project #9 – Release Validation Tool: May 2018 to August 2018

Client: Daimler AG

Team size: one

Technology: C# & NX open

Framework: .Net

Role: Developer

Project description:

- The application is used to do part cleanup
- The application will also create part attribute as Release Validation
- It will create a log file for the user informing about any change in volume after executing the tool

Project #10 – Boltzen Clash Analysis: July 2018 to September 2018

Client: Daimler AG

Team size: one

Technology: C# & Team center Visualization Mockup

Framework: .Net

Role: Developer

Project description:

- The application is used to find the clash between the bolts and highlight with transparent body in Team center visualization
- The application will read all the bolt information from the .plmxml file and store in the proper data structure
- Get the position of the bolt and put the body to highlight the clash

Project #11 – Metrics Tool: June 2017 to April 2018

Client: Vought

Team size: two

Technology: C#, Excel and Power point Automation

Framework: .Net

Role: Developer

Project description:

- The application is used for generating slides based on customer requirement
- The application will invoke the user to browse only the required excel files
- Application will read the input data from excel and will populate the output in a proper format in presentation

Project #12 – Hole Location table macro: December 2016 to March 2017

Client: DIEHL

Team size: one

Technology: VBA and Catia Automation

Role: Developer

Project description:

- The macro is used for generating table for holes present in drawing
- The macro will invoke the user to select primary and secondary view
- The tool will check whether the two views are orthogonal or not
- User can move the 2D component (X-Y/Y-Z/Z-X) anywhere in the corresponding view. Tool will calculate the position and generate the hole table in drawing based on new position of component

Project #13 – Wire Harness Quality checker: August 2016 to May 2017

Client: DIEHL

Team size: two

Technology: C#, Catia Automation and Team center reports

Framework: .Net

Role: Developer

Project description:

- Quality checker tool is used to perform quality checks on assemblies/drawings based on checking criterions provided by client
- Quality checker tool is doing validation checks for the wire diameter as well as cable length
- The tool is performing checks on 2D, 3D as well as information from Team center
- The tool is taking inputs from user interface to create Html report as an output having information about how many checks have passed or failed
- The tool is also creating Hook-up list, wire list and label list based on customer requirements

Project #14 – Nastran Post Processing Tool: November 2015 to January 2016

Client: Pratt and Whitney Canada

Team size: one

Technology: Python and Wx Python

Role: Developer

Project description:

- Nastran post processing tool is used to segregate the ID's provided in .dat and populate the results in excel file
- The tool is collecting the values from the punch file (Output from Nastran) for the specified ID's present in .dat file
- The tool is also reading the data from time- frequency file to do interpolation (Linear) for different set of time steps present in punch file
- The tool is creating output in form of excel consisting of different sheets for force, displacement, velocity and acceleration

Project #15 - DART (Deterministic Airfoil Response Tool): November 2014 to June 2016

Client: Pratt and Whitney America

Team size: three

Technology: Python, Matlab, Java

Role: Developer

Project description:

- DART is a post processing tool to minimize the design of experiments on Dassault system iSight
- DART is a standalone application for emulating different parameters of V788 aero foil
- DART is used to monitor the variations in Campbell (Mode Frequencies) as well as Goodman (Stresses) plots
- The DART program calculates mode frequencies as well as stresses based on information provided in various input file (.csv, .txt) formats, interpolation files, configuration file as well as displacement contours
- DART tool provides user to save modified V788 data in XML format

Education

Year of Passing

2014

Qualification

M Tech in Solid Mechanics and Design

Indian Institute of Technology Kanpur

Percentage/CGPA

6.75/10

2012	B E in Mechanical Engineering Bundhelkhand Institute of Engineering and Technology, Jhansi. (Affiliated to Uttar Pradesh Technical University)	69.8%
2007	Class XII– Affiliated to CBSE HAL School	87.20%
2005	Class X – Affiliated to CBSE	85.20%

Academic research experience

Masters Thesis – Kalman Filter Based Degradation Model for Rotating Bearing System : August 2013 – July 2014

Advisor – Professor N.S. Vyas, IIT Kanpur

- Project was aimed at finding out the remaining useful life of the degrading systems
- Bentley Nevada rotor kit system was used for obtaining the faulty data of the bearing system
- A set of real running time data was also obtained from test rig set up at HAL Koraput
- **Approach** –Development of Kalman filter for estimating the remaining useful life
- Analytical solution developed using LabVIEW and Matlab, was then compared with the experimental results

Bachelor's Thesis –A Parametric Analysis of Micro turbine based Power Generation: Aug 2011 to May 2012

Advisor: Dr. N.P. Yadav, Professor, BIET, Jhansi

- Prepared the diagram of power generation system using CATIA
- Design of combustion chamber and turbine
- Employed Thermodynamic Analysis for power output
- Studied variations of power with various parameters (air-fuel ratio, pressure ratio) using both analytic and experimental work

Professional research experience

Project #1 – Early Detection of cancer using segmentation: Sep 2018- Until Date

Client: Mylan

Team size: three

Technology: Python, C# & Flask

Role: Developer

Project description:

- Collected data from Kaggle for different type of healthy as well cancerous cells
- Prepared a deep learning model to segment the healthy as well as cancerous cells
- User or Medical personnel's will upload the microscopic image on the server
- Segmented image will be obtained from trained model and uploaded to doctor's portal
- Developed UI for doctors to take final decision whether the person is effected from cancer or not

Project #2 – Corporate Fitness Management System: Oct 2016 to Oct 2017

Client: Cyient

Team size: five

Technology: Arduino, C#, Django and Thingworks

Role: Developer

Project description:

- Created weight scale using load cell and logging each employee weight data into cloud
- BMI values are calculated based on weight and height of each corporate employee
- Based on BMI values, proper diet as well as exercise plan will be sent to personal Mail id as well as mobile

Project #3 – Monitor underground leaks in water pipeline: Oct 2016 to Oct 2017

Client: Cyient

Team size: five

Technology: Arduino, C#, Django and Thingworks

Role: Developer

Project description:

- Measuring discharge at each nodal points and comparing values with input with output
- Based on each nodal value if there is a mismatch in values, information will be sent to concerned authorities
- Website is developed for the government officials to monitor the live analysis of flow in the pipelines

Project #4 – POC for Robotic arm: December 2015 to May 2016

Client: Bombardier

Team size: three

Technology: Python, Simmechanics, Simulink, C# and Arduino

Framework: .Net

Role: Developer

Project description:

- Performed forward and reverse kinematics for 3 Axis planar arm
- Simulink model is generated to observe and simulate the motion of arm using Simmechanics
- Arduino is used to control the hardware based on inputs given from user interface

Certifications

- Machine Learning using Python(Udemy)
- Deep Learning using Python (Udemy)
- Statistical Analysis for Data Science(Udemy)

Achievements

- Received Bronze award for commendable performance in setting up CI-CD pipeline as well as accomplishing the Ranorex automation first time in team for automating test scripts
- Received certificate of appreciation from Daimler for commendable performance in delivering project on team-center visualization
- Received certificate of appreciation from Cyient for exemplary performance in **Spirit of Cyient**
- Received third prize from Cyient for exemplary performance in **Open Innovation Challenge-V**
- Achieved **AIR-310 (99.6 percentile)** in GATE 2011(Pre-Final Year)
- Achieved **AIR-710 (99.57 percentile)** in GATE 2012 (Final Year)
- Received certificate of appreciation from **HAL School** in class-XII (2006-2007)
- Received certificate of merit for excellent performance in **National Mathematics Olympiad**

Co-Curricular Activities

- **Innovation Catalyst:** Mercedes Benz Research and Development India, Bengaluru
- **Secretary-** Literary Events, Mechanical Engineering Forum BIET Jhansi for the academic year 2010-2011
- **Secretary-** Mechanical Engineering Forum BIET Jhansi for the academic year 2011-2012
- **Coordinator-** Annual Tech Fest, BIET Jhansi for the academic year 2011-2012
- **Coordinator-** Show Management, Impressions IIT Kanpur for the academic year 2012-2013

References

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