Ganesh Mundhe

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Professional Summary

Result-oriented software engineer professional with around 4.7 years of experience in field of Visualization Infrastructure. Experienced in full software project life cycle management from design to implementation to integration.

Education

B.TECH. MECHANICAL ENGINEERING | 2010-2014
VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY NAGPUR (VNIT)

- GPA : 7.68/10

Core Competencies

- Ability to do Developments/Debugging/Refactoring on large scale cross platform software.
  Code Maintenances. Understanding complex code bases, fixing hard to find bugs. Doing performance optimizations.
  Solving memory leaks, crashes, solving multithreading issues
- Ability to code frontend and backend in Visualization/Graphic render based application product
- Ability to learn and adapt to new code, frameworks and doc them if required
- Good team player and communication across organization

Technical skills

- Programming Languages : C, C++, C#, OpenGL API, WPF
- Visualization Infrastructure technologies
- UX designs
- CAA [based on MS-COM], PLM data model
- Design patterns and Data structures, algorithms
- Batch scripting
- Agile mythologies, DevOPs practices
- Creating Unit tests, GUI record tests, Batch tests

Professional Experience

SOFTWARE ENGINEER DEVELOPER | DASSAULT SYSTEM
SEPTEMBER 2014 – PRESENT | 4.6 YEARS

Visualization, Technology Framework for CATIA/3DEXPERIENCE | 2.6 Years

CATIA is world leading CAD/CAM software product brand for product design and PLM solutions for 3D collaborative creation.
Visualization framework is written in C++ and uses OPENGL API for rendering.

Solidworks Visualize (Bunkspeed) | 2 Years

Solidworks Visualization products are created for anyone who needs to create professional photo realistic-quality images, animations, and other 3D content in the fastest and easiest way possible. Frameworks are written in C# and .net WPF application with MVVM pattern, use NVIDA Iray tech for rendering.
Currently working for Solidworks Visualize PLM.

Responsibilities

- Feature enhancement, develop and maintain Visualization Infrastructure
- Develop technologies and services required for application workbench commands
- Debug, major part of work is done using Visual Studio Debugger with supporting tools gDebugger, Xcaptain, Microsoft Sysinternals tools, etc.
- Understand Customer requirements and convert them to new functionalities
- Write and modify unit tests, GUI tests
- Work with Agile Sprint DevOps practices
- Write functional and product enhancement docs for user/tester reference
- Fix crashes and critical internal/external issues based on priority
- Reviewing code and quality maintenance
- Mentor new comers in team

Projects

Bounding Box Render Optimization | CATIA | 1 Year

- In Visualization render pipeline, optimized bounding box render which is way faster in computation of boundaries of graphical representations.
- Very high impact code: Controlled release promotions and units tests.
  API architecture redesigned and provided multithreaded event handlers.

3D Viewer Navigation: Walk-Fly Enhancements | CATIA | 1 Year

- Improved current walk-fly navigation experience
- Provided collision detection with navigation
- Integrated 3D space mouse support.

Stereoscopy Integration – Generate panoramic Outputs | SW Visualize |6 weeks

- Special 360 Spherical camera to map 360 on 2 D viewport
- Preview and Render 360 panoramic images (can be uploaded on Facebook, YouTube etc.)

Movie Textures| SW Visualize | 6 week

- Special textures generated from clip/movies or entire movie in animation
- Can be mapped on any surface as decals
- Texture animation can be rendered as Video along other animations

PhysX Integrations | SW Visualize | 9 weeks

- Integrated NVIDIA PhysX .net wrapper to allow physics simulation in SW Visualize
- Integrated Gravity, Collision, Earthquake Physics on Models bodies
- Show Physics Scene Mesh Colliders in Visualize- Box, Convex hulls
- Wrapper is written in .net, c and integration done in C#, WPF

Offline Rendering Lightweight App Improvements| SW Visualize | 6 Weeks

- Instead of rendering through main app a separate light app is used just for rendering
- Developed Custom Windows Service to keep communicate, sync with Main application
- Developed services on light application to edit render settings, Job task list sequence, etc.
- Cluster networking to utilize connected hardware to faster rendering
- Complete New User Friendly UI

Feedback Survey Tool | Solidworks Visualize | 3 weeks

- Provided a Feedback Survey notification after certain conditions which direct to feedback form site.
- Created additional user setting configuration to track conditions and input by user for survey notification
- Developed in C#, WPF application.

Model Tree Improvements | SW Visualize | 6 weeks

- Re-Implemented Model Tree backend to Support physics and new mdl materials
- Added extra features like renaming nodes, sorting (auto, manually), Grouping, Duplicating etc.
- Implemented Search Functionality based on Name, Materials etc.
- Backend Developed in C#, UI in WPF

Movie Textures Improvement | SW Visualize | 12 week

- Instead of generating textures from clip/movie generate run time buffered pixel data
- Rendered runtime playing video
- Implemented player to control video with various options, like play/pause, speed –up/down, reverse /forward play, loop, etc.

Inline Render | SW Visualize | 14 weeks

- Along with offline render, new rendering option is provided to generate Realistic Render Output
- User friendly UI, fast initializing, render can be run in low grade systems much faster.