Software Engineer – Pubudu Ranathunga

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Experience Summary(4+ years)

- 4+ years experience in Microsoft Visual C++ .
- Sound practical knowledge in OOP,OOD and UML .
- Database Design and relational database management system (DBMS).
- UI (Winforms) and Application/service tier development
- Web application (client and server ends) development
- Desktop application development for coparate enviroment.
- Designing, Developing, Implementing, System Integrators and managing complex software systems with stringent up-time requirements.
- Work in a closely-collaborative team environment.

Skills and Technologies.

- **Concepts:** SDLC, OOP, OOAD, UML, Design Patterns.
- **Programming:** C++, .Net Technology, C#.Net, Java , Python
- **Libraries:** OpenCV, OpenGL , OGRE, WX widgets. Open CPN,Boost
- **Web Technologies :** JavaScript,HTML,HTML5
- **Database Technology:** MSSQL, MySQL
- **IDE :** Visual Studio, NetBeans , Eclipse, PyCharm
- **Version Controls** : SVN, GIT
- **Other** : 3D MAX, Maya, Photoshop, After effects , Premier pro, Arduino, Raspberry PI , Microsoft Kinect, MS-Office

Professional Qualifications

- Course in Digital animation
- Course in 3D Advertising
- Diploma in Hardware Engineering with Networking
- Diploma in Network Administration

Working summary

Sri Lanka Navy *www.**navy**.lk*	Software Engineer(R&D) **Sub**-**lieutenant**	Sept 2010 – Dec 2014
Simcentric Technologies *www.simct.com*	Software Engineer(C++)	April 2015 – Present

Involved Projects

"Vidusayura" Ship Simulation project   SL Navy (SLt)

System:

Vidusayura is a real-time perception enhanced virtual environment for maritime education which simulates six degrees of freedom ship motions. The simulator provides an immersive environment by incorporating real ship controllers and generating construction of cave environment.

Functionality:

- Provide immersive environment to sailors
- Controlling the environment conditions of the simulation using separate server
- Multiple display system
- Tangible hardware interfaces
- Collision and realistic visual and audible feedback

Technologies:

Microsoft Visual C++, Ogre, C#, XML , Nvidia physicsX

Responsibilities:

- Work as Team member.
- Design visual system.
- Develop hybrid physics system.
- Work as an additional 3D modeler
- Integration of 3D models in to the system
- Deploying team member of the system in a training environment.
- UI designer for the system

URL: https://www.youtube.com/watch?v=lavKVAZV6n0

Integrated Maritime Surveillance System (IMSS)   SL Navy (SLt)

System:

The system is developed to improve the surveillance capabilities of the SL Navy by fusing multiple surveillance information sources such as Radar data and AIS data.

Functionality:

- Visualize Merchant ships transmitting AIS data.
- Visualize Merchant ship data on web.
- Visualize Radar targets.
- Track targets through system.
- View Radar images of selected Radar.
- Recording surveillance data.

Technologies:

Microsoft Visual C++, Open CPN, WX widgets, My SQL

Responsibilities:

- Develop radar data and image integration system.
- Develop data fusion system.
- Deploying the system in the selected places.
- Provide maintenance support.

Serial Port Server   SL Navy (SLt)

System:

The system is developed to retrieve data from serial communicating devices and distribute those data among the clients through TCP/IP network.

Functionality:

- Communicate with RS 422 and RS 232.
- Communicate with multiple clients simultaneously.
- Manage clients from the server.

Technologies:

Python 2.7, Raspberry PI

Responsibilities:

- Member of the team designed the system.
- Documentation.
- Implementation of the Server.
- Deploying the system.

Target tracking system   SL Navy (SLt)

System:

The system is developed to measure the deviation of the shooting from the target.

Functionality:

- Detect deviation from the center of the target.
- Display the variation on a screen.
- Record shooting deviations.

Technologies:

Microsoft Visual C++, OpenCV, MySQL

Responsibilities:

- Design the system.
- Design the shooting range.
- Implementation of the target tracking system.
- Develop the UI.

Ambience Product suite   Simcentric Technologies   (SE)

System :

The product suite is a simulation plugin to VBS game engine. This plugin generates human and vehicle movements to untrained environments provided by the VBS user

Functionality

- Simulate crowd behaviors to dynamic landscape of VBS.
- Simulate Vehicle and traffic light s on the VBS environment.

Technologies:

Microsoft Visual C++, Microsoft Visual C# , VBS Scripting, RPC communication, TCP/IP Communication, Boost

Responsibilities:

- Implementation and maintain the PBO (VBS side representation of plugin).
- Maintenance of the communication interface of the plugins and the simulation engine.
- Maintenance of crowd and vehicle simulation plugins.
- Implementation of System performance monitoring tool using windows API.
- Implementation of Human Behavior Visualizer.

Kinect base workout monitoring system   MSc research project

System :

The system is developed to measure and adjust the mistakes performed during workout and reduce the workout related injuries.

Functionality :

- Track user movements.
- Provide tangible feedback to the user's relevant joint through haptic device.
- Provide visual guidance to the user.
- Workout can be controlled using voice commands.
- Reporting framework by Crystal Report.

Technologies:

Microsoft Visual C#, Arduino, Microsoft Kinect ,Microsoft Kinect SDK, Bluetooth, Raspberry Pi, Python

Responsibilities:

- Design the software and hardware system.
- Develop the Monitoring system.
- Develop the haptic device using Arduino and phone vibrators.
- Implementation of Bluetooth communication between software and haptic device using Xbee module.
- Validate the system using user testing.

Personal Details

Full Name	Ranathunga Gamaralalage Pubudu Ranathunga
Date of Birth	16th March 1987
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Refrees

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