SOFTWARE ENGINEER

Professional Summary

Software engineer with an extensive experience in the development of commercial products. Proficient knowledge in full product lifecycle, development languages and design pattern. Experienced working in fast paced Agile development environment, meeting requirements and deadlines. Good working experience in developing applications using Microsoft .NET Technologies which includes .NET framework, C#, WPF, ASP.NET, ADO.NET, SQL server, entity framework, LINQ, and JSON. Skilled with .NET (TPL, PLINQ), proficient in multithreading, thread pooling, locking and collections. Experienced in C++, C++/CLI, MATLAB, Python, Perl scripting, FORTRAN and VBA. Strong Knowledge in Object Oriented Programming (OOP) concepts, TDD, MVVM pattern for WPF applications, RESTFUL services, and N-Tier architecture. Experienced in Documenting, Preparing Test Plans, developing test cases and Testing (Unit, System, Integration, User Acceptance testing and Regression testing). Strong background in numerical analysis and mathematical modeling, optimization, data processing, multiphase flow, heat transfer, compositional fluid modeling and flow assurance. Ability to work in a team and as an individual with minimal supervision. Exceptionally well organized, strong work ethics and willingness to work hard to achieve employer objectives.

Experience

Software Engineer

January 2013 to Current Carlsbad , CA

- Design and develop software (PIPESIM) targeting a widely used platform in the oil and gas industry.
- PIPESIM GUI built using C#/WPF with SQL CE backend as the database and calculation engine written in C++ and FORTRAN.
- Developed the rich desktop based applications with good interactive design using WPF and MVVM and .NET framework.
- Produced high quality production-ready front end XAML code, supporting logic in C# language.
- Involved in developing Styles and Themes using XAML to customize the existing WPF controls using Data Temples, Control Templates and Triggers.
- Extensively worked with WPF Data binding, Converters, behaviors and Resource Dictionaries.
- Used Inversion of Control and Dependency Injection patterns in order to resolve the instances at runtime and to manage their life time.
- Involved in writing LINQ queries, Lambda Expressions and used LINQ to Objects to query the in-memory object collection.
- Used Visual Studio productivity tools such as ReSharper and Style cop for code refactoring, improving code quality and consistency.
- Worked with different third party controls which include Infragistics (Docking Manager), Actipro (Ribbon), Steema Teechart (Charts), Northwoods (GoDiagram).
- Worked on Microsoft Team Foundation Server (TFS) to allow for a secure code in a multi-team environment.
- Developed Perl scripts for automated TFS check-out for Third Party API integration.
- Integrated Third Party compositional engine API written in C++ in PIPESIM and developed a wrapper for exposing the API functionalities.
- Developed C++/CLI layer for communication between compositional module in C++ and GUI in C#.
- Delivered a refactoring of the compositional module in C++ and FORTRAN, reducing run time two fold.
- Delivered a unified compositional calculation engine in C++ and FORTRAN for both PIPESIM new and old GUIs for result consistency.
- Developed work flows for Data Matching, multiphase booster, well importer and exporter for PIPESIM new GUI written in C#/WPF.
- Implemented unit testing coding practices for the functionality written in the project.
- Developed RESTFUL Web API for PIPESIM extensibility and presented an overview of the RESTFUL Web API to entire PIPESIM team.
- Technologies: .NET, C#, WPF, MVVM, LINQ, Entity framework, ReSharper, IoC, Dependency Injection patterns, C++, FORTRAN, XML, REST, JSON, HTTP, TFS, Agile/Scrum.

Post-Doctoral Research Scientist

November 2011 to December 2012 Needham , MA

- Researched and developed flow-regime-independent multiphase flow model suitable for optimization in PIPESIM and also robust enough for use in Multi-Segmented Wellbores (MSW).
- Developed a new drift velocity valid for all inclinations for Intersect (IX) - a coupled reservoir, surface network simulator jointly owned by Schlumberger, Chevron and Total.
- Constructed a MS Access database for over 6000 multiphase flow experimental data and developed a VBA scripts to connect the multiphase flow experimental database to PIPESIM engine for automated model validation.
- Technologies: C++, FORTRAN, VBA, MATLAB.

Research Assistant

August 2007 to November 2011 Penn State University ï¼ University Park , PA

- Developed physically rigorous numerical models to simulate multiphase transport processes in PEMFC under transient condition using experimentally measured capillary pressure data.
- Modeled the effects of mass transport on the agglomerate of the catalyst layer on the optimization of HT-PEMFC's components for effective membrane hydration.
- Technologies: C++, FORTRAN, MATLAB.

Research Assistant

August 2005 to August 2007 Penn State University ï¼ University Park , PA

- Investigated pair-wise interactions between droplet fluids in both Newtonian and non-Newtonian fluid flow.
- Simulated 3D multiphase flow behavior and rheological properties of concentration emulsions using a front-tracking Direct Numerical

Simulation (DNS) approach.
- Technologies: C++, FORTRAN.

Education
PhD : Mechanical Engineering , 2011 The university of Texas ï¼ City , State Mechanical Engineering Research: Simulation, analysis, and mass-transport optimization in Proton-Exchange Membrane Fuel Cells.
MS : Mechanical Engineering , 2007 University of Delaware ï¼ City , State Mechanical Engineering Computational studies of multiphase flow behavior in both Newtonian and Non-Newtonian fluids.
BS : Mechanical Engineering , 2003 Obafemi Awolowo University Nigeria GPA: First Class Honors First Class Honors Mechanical Engineering RESTFUL Web API, DevelopMentor 04/14 Multithreading in C#, DevelopMentor 12/13 Essential .NET with C# for .NET 4.5, DevelopMentor 09/13 Lean Software Project Management, Industrial Logic, Inc. 08/13 Intensive C++ Training, DevelopMentor 07/13 Lean Object Oriented Design Bootcamp, Industrial Logic, Inc. 06/13 WPF Programming Using C#, Hands On Technology Transfer, Inc. 04/13 Learning to Program with C#, Hands On Technology Transfer, Inc. 03/13 Lean Requirements Management, Industrial Logic, Inc. : 02/16
Publications
04/13 Assuring Flow from Pore to Process, NExT, a Schlumberger Company 04/12 Introduction to Petroleum Exploration and Production, NExT, a Schlumberger Company Publications and Conferences Stone, T.S., Damas, C.E.P., Brown, G., Heidari, M., Law, D.H-S., Olapade, P.O. and Bailey, W.J.: "Advanced Wellbore Simulation of Flow Control Devices with Feedback Control for Thermal Operations," presented at the SPE Reservoir Simulation Symposium, The Woodlands, TX, 18-20 February 2013. Olapade, P.O. and Meyers, J.P.: "Modeling the Effects of MPL on the Transient Response of Proton-Exchange Membrane Using Experimentally Measured Capillary Pressure," Proc. The Electrochemical Soc. Transactions, 41 (1): 2011, pp.267-278. Olapade, P.O., Meyers, J.P., Borup, R.L. and Mukundan, R.: "Parametric Study of the Morphological Proprieties of HT-PEMFC Components for Effective Membrane Hydration," J. of the Electrochemical Soc., 158 (6), 2011, B639-B649. Olapade, P.O., Meyers, J.P., Mukundan, K., Davey, J.R. and Borup, R.L.: "Modeling the Dynamic Behavior of Proton-Exchange Membrane Fuel Cells," J. of the Electrochemical Soc., 158 (5), 2011, B536-B549. Olapade, P.O., Mukundan, K., Davey, J.R., Borup, R.L. and Meyers, J.P.: "Modeling the Dynamic Behavior of Proton-Exchange Membrane Fuel Cells", presented at the 218th Meeting of the Electrochemical Society, October 2010, Las Vegas, NV. Olapade, P.O., Singh, R.K. and Sarkar, K. "Pairwise Interactions between Deformable Drops in Free Shear at Finite Inertia," Phy. of Fluids, 21 (6), 2009. Sarkar, K., Olapade, P.O. and Singh, R.K.: "Reversed Trajectories of Interacting Pair of Drops in a Steady Shear at Finite Inertia," presented at the American Physical Society, 61st Annual Meeting of the APS Division of Fluid Dynamics, San Antonio, TX, 23-25 November 2008.
Skills
.NET 4.5, .NET, 3D, Agile, API, approach, C++, CLI, Charts, database, DNS, XML, FORTRAN, GUI, HTTP, interactive design, JSON, Logic, MATLAB, memory, MS Access, C#, Exchange, network, Object Oriented Design, oil, optimization, Perl, processes, coding, Programming, Project Management, quality, Research, Scrum, scripts, Simulation, develop software, SQL, validation, VBA, Visual Studio, wise, written