HARICHARAN PULUGURTA

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Summary

- More than 9 years of experience in software development using various platforms such as **C#, ASP.NET, JavaScript, HTML, CSS , MongoDB , SQL Server, MS Access, FoxPro , nHibernate, LinqToSQL, Entity Framework, Silverlight, Domain Services.**
- Expertise in developing Geographical Information Systems Applications (GIS) using **ArcGIS Server Suite, ArcObjects, MapObjects, ArcGIS API for Silverlight, Spatial SQL Server 2008.**
- Database programming using **Mongo Shell, SQL, T-SQL, Stored Procedures, Triggers, VBA.**
- **MongoDB for DBA's Certificate** - July 2013
- SAS Certified Base Programmer
- Publications and conference proceedings in various journals.

Summary of Skills

Programming and Development Tools:	C#, JavaScript, Python, SQL/TSQL, XAML, HTML, CSS, VBA, WPF, Silverlight, ASP.NET MVC/Web Forms, MongoDB, SQL Server, SQL Server Reporting Services, Mongo C# Driver, nHibernate, Entity Framework, Windows Workflow Foundation, WCF, WCF RIA Services, LinqToSQL, Domain Services, ADO.NET, ADO, DAO, Lucene.net, Knockout, CoffeeScript, DevExpress, Telerik, SonyVegas, Couchbase, Visual Studio 2012/2010/2008/6, Git, SVN, nHibernate Profiler, SQL Profiler, dotTrace, Luke, WebStorm, MongoVUE, Robomongo, LinqPad, NewRelic, Resharper.
GIS:	ArcGIS Server 10, ArcGIS Desktop 10, ArcSDE 10, WebADF, ArcObjects, Python Scripting for ArcGIS, MapObjects, ARCGIS API for Silverlight, Bing Maps
Database:	MongoDB, SQL Server 2012/2008, MS Access, FoxPro
Statistics:	SAS, R, SPSS, MINITAB, MATLAB
Platforms:	Windows 8/7/Vista/XP, Mac OS X

Experience

10/2011 - Current
Brooklyn, NY

Senior Software Developer
THE NEW TEACHER PROJECT

TeacherTrack2.org – *TT2*
- Develop web-based Human Capital system in Agile environment and using Git as source control using Visual Studio 2012.
- Test-driven development using MbUnit, Galelio, Selenium, qUnit and Jasmine.
- Use of design patterns such as MVVM, MVC for designing web pages.
- Extensive use of JavaScript, CSS, HTML to design and develop web pages.
- MVVM based JavaScript development using Knockout, CoffeeScript.
- Server side development using C#, ASP.NET, MVC, Windows Workflow Foundation.
- NoSQL database programming using MongoDB, C# and JavaScript.
- Database programming using SQL Server, nHibernate, Entity Framework, Stored Procedures, Views.
- Use of Lucene.net for indexing data and Couchbase server for caching.
- Extensive use of performance tools such as nHibernate profiler, SQL profiler, dotTrace, NewRelic for improving performance of website in terms of faster load times.
- Development tools such as MongoVue, LinqPad, and WebStorm.

Production Support
- Provide 24x7 production support for TT2 which includes addressing alerts from production servers, setting up and maintaining the TT2 infrastructure, address any critical issues.
- Monitor production environment to identify and provide recommendation to fix issues which includes looking at IIS Logs, MongoDB logs (MMS) and TT2 custom logging.
- Deploy code to beta and production at end of each sprint (including mid-sprint deployments) using CruiseControl.
- Help create custom CruiseControl jobs to create backups from production (MongoDB and SQL Server), scrub data and restore backup's to beta and alpha environments.
- Provide support to TT2 data warehouse application.

Data Center Migration
- Helped in moving the TT2 from Rackspace to ColoGaurd.
- Helped in setting up beta and production environments.
- Installed required software packages on Windows 2008 servers required for TT2 which includes IIS, MongoDB, SQL Server, Cruise Control and other essential software's.
- Deployed a 3 member MongoDB replica set and helped setup a 2 node SQL Server Cluster on production environment.
- Deployed a 3 node Couchbase server which is used for caching data for TT2.
- Deployed SQL Server reporting services and migrated existing reports to new data center.
- Created various Monitors/Alerts using Alchemy Eye that monitor the health of windows servers, web site and database servers and send alerts to the production team.

| 04/2011 - 10/2011 | **Software Developer** |
| Brooklyn, NY | **WINDANALYTICS.COM** |

WindAnalytics.com
- Designed a web application using n-Tier architecture for wind turbine installer/property owner to analyze whether a property is cost effective for wind turbine installation using ASP.NET MVC3, **C# 4.0**, **WCF, Silverlight 4.0**, SQL Server 2008, ArcGIS Server 10.0 and ESRI Silverlight API
- Developed **authentication** module using **ASP.NET MVC3** with features such as CAPTCHA.
- Integrated with **Zoho CRM** (Zoho API) for forwarding the customer details to the CRM database
- Integrated with **PayPal** for payment processing
- Created ArcGIS cached service to create a wind class map for USA using NREL data that shows the average wind pattern. Supporting geoprocessing services using Python to determine the wind class for missing areas based on nearest spatial search
- Extensive use of **Linq**, **LinqToSQL**, Entity framework and stored procedures for **SQL Server** CRUD operations and use of **Domain Services** consumed by the Silverlight
- Strict adherence to quality control practices pertaining to code such as version control using SVN, coding practices such as **MVVM** (Silverlight), MVC3 (ASP.NET), CodeRush Xpress and **unit testing**.

Meteorological Data Checker/Met Station Checker
- Developed a web application using n-Tier architecture for wind analyst to process met station data for wind analysis using **ASP.NET MVC3, C#4, WCF RIA, Silverlight 4**, SQL Server 2008, ArcGIS Server 10.0 and ESRI Silverlight API.
- Created an **ArcGIS dynamic service** using **ArcGIS Server** that returns data (over 20,000 met stations) from SQL Server as dynamic tiles/images that change as the data changes.
- The application allows an analyst to select an area of interest on the map to retrieve all the met stations in the area (using WCF RIA, Domain Services, LinqToSql and SQL stored procedure). The analyst selects a station to further process the data.
- Extensive use of Linq, LinqToSQL and Entity framework for **SQL Server** CRUD operations.
- Strict adherence to quality control practices pertaining to code such as version control using SVN, coding practices such as **MVVM** (Silverlight), MVC3 (ASP.NET), StyleCop and **unit testing**.

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07/2010 to 04/2011 Burlington, MA	**Software Developer** **FOLIAGE SOFTWARE SYSTEMS**

September 2010 – April 2010 – VOLPE, Boston, MA
- Developed a web application for FAA/NPS personnel to download/view/add/modify GIS data using ASP.NET 4.0, **C# 4.0**, **Silverlight 4.0**, **SQL Server 2008**, **ArcGIS Server 10.0**, ArcSDE, ArcGIS API for Silverlight in an AGILE software development process.
- Extensive use of Silverlight **Telerik** Rad Controls for displaying data (tabular and graphical)
- Utilized Web Services to automatically download GIS data (USGS Seamless server) on the server and import it to the ArcSDE database.
- Created REST based geoprocessing services using ArcGIS Server, Python and **ArcObjects** to send large amounts of GIS data as images.
- Extended the ArcGIS API for Silverlight for building complex user specific GIS tools that utilize the geoprocessing services/third party web services to analyze the GIS data.
- Strict adherence to quality control practices pertaining to code such as version control using SVN, coding practices such as **MVVM**, styling using StyleCop and unit testing.

July 2010 – September 2010 - VOLPE, Boston, MA
- Developed a prototype web based geographical information system for FAA using **ASP.NET, C#, ArcGIS Server 9.3**, ArcSDE 9.3, ArcGIS **WebADF** in an AGILE process.
- The web based GIS application had features such as connecting to ArcSDE, editing features (adding, deleting and changing geometry).
- Developed custom GIS web controls that extended WebADF controls using C#.
- Conversion of WEB ADF based application to **Silverlight** version.

12/2007 to 07/2010 Chicago, IL	**Software Developer** **INFRASTRUCTURE MANAGEMENT SERVICES, INC**

- Developed a data collection application using **C#, DevExpress, SQL Server** that interfaced deflection measurement instrument with a GPS instrument using serial port communication.
- Developed a web PMIS that integrates pavement condition data (Data, Images and Videos) with GIS maps using **C#, ASP.NET**, ADO.NET, Silverlight 4, WCF, Bing Maps and SQL Server.
- Developed a Silverlight application using **C#, ASP.NET** for field crew/office personnel. Field crews upload data online as data are collected which is then evaluated by office personnel.
- Developed various kinds of 3D data visualization techniques using ArcGIS, KML/Google Earth, **Silverlight 3**, Bing Maps and field surveying data.
- Developed a QA software analysis tool using **C# Winforms**, **WPF** and SQL Server to QA the data. The statistical models in the system help to identify and correct the data quality issues.
- Developed a low cost to tie-in the field data to its geographic location by creating a software application using **C#** that interfaced with GPS instrument and road data collection equipment.
- Developed a new image capture software using **C#,** Sony Vegas to enable capturing of hi-definition images of pavements from video tapes for integration with pavement network data.
- Introduced concept of using open source alternatives such as Google Earth for cost-constrained clients to display pavement data and integrate with existing pavement management systems.
- Involved in creating project documentation in **SDLC** phase using MS Project, IBM Rational.
- Responsible for maintaining/upgrading existing IMS pavement management software called PavePRO developed in **Visual FoxPro**.

08/2002 to 12/2007 Toledo, OH	**Doctoral Research Assistant** **UNIVERSITY OF TOLEDO**

- Performed extensive research, development and analysis of pavement management information system (PMIS) for the Ohio Department of Transportation (ODOT). Liaised closely with ODOT Office of Pavement Engineering in gathering user requirements and delivering project updates.

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- Developed Pavement Management Information System (PMIS) for **ODOT**. PMIS is a data input, analysis and reporting software in **VB6**, **MS Access**, **DAO**, **ArcGIS** and **MapObjects**.
- Spearheaded development and implementation of Aggregate Geographical Information System (AGIS) for **ODOT** using **C#**, **ArcGIS, ArcObjects** and Access for use in performing analysis of spatial statistics culled from pavement aggregate data.
- Skillfully analyzed and programmed into PMIS statistical models such as regression, Markov, Kaplan-Meier, Weibull and linear mixed effects.
- Utilized data mining algorithms such as cluster analysis, decision trees and fuzzy logic using **C#** and **Java** to identify existing patterns in ODOT data.

Education

Ph.D., Engineering   **2007**
UNIVERSITY OF TOLEDO — Toledo, Ohio

Master's degree, Transportation Engineering   **2002**
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY — Hyderabad, India