KAREN ROBINE
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ACCOMPLISHMENTS

- Over 30 years of experience combining information systems technologies, database management and integration, and specialist programming services
- Over 20 years specializing in ESRI GIS tools, geospatial services, GIS architecture and applications development
- Extensive experience developing web-based mapping applications using ArcSDE, ArcGIS Server, Leaflet, Google Maps API, OGC, ArcIMS, Flex, Silverlight, ASP.NET (MVC & Web API), WCF, WPF, HTML5, JavaScript, Ajax, ASP/ActiveX, ColdFusion, Java, JSP, Python and Servlets
- Proven track record in leading edge technologies including Java, C#, VB.NET and VB programming, and both server/client-side and web-based applications development
- Extensive experience implementing ArcSDE, ArcGIS Desktop, ArcGIS Mobile, and ArcGIS Server solutions (includes projects spanning pre-release through product launch and implementation)
- Received multiple Awards of Excellence for training style and project administration
- Experience in software testing and data validation (including NUnit/JUnit)
- Full stack software, Software Development Life Cycle (SDLC) expertise, development team lead and project management experience within an Agile/SCRUM development environment (Agile tools include Jira, TeamForge, TeamViewer, Microsoft Team Foundation (TFS), Git, and Rational)

WORK HISTORY

GIS Engineer / Consultant – *Robine GIS, Inc. (CO), 1999-Present*
- Providing senior level consulting, project management, database design, development, and specialist programming. This includes a number of projects integrating ArcSDE, ESRI GeoDatabase, Oracle, MS SQL Server, Access, and other databases with robust GIS desktop, internet and intranet mapping applications
- Developing ArcGIS Server applications for editing natural resources, telecommunications routes and utility networks located in Oracle and SQL Server databases. Added web services for geoprocessing functions supporting SQL Server Reporting Services. Implemented applications using C#, JavaScript/HTML, Flex, Silverlight, WCF, Server Object Extensions (SOEs), and ArcGIS Server 9.2 thru 10.3 software within Web ADF and REST/SOAP frameworks
- Developing HTML5 ArcGIS Server applications utilizing ESRI's JavaScript API along with other JavaScript frameworks such as Dojo, jQuery, AngularJS, Backbone/Marionette, Underscore, Bootstrap, Node.js, as well as tools such as gulp/grunt. These public-facing internet-based applications may be accessed on browsers, smartphones and tablets
- Developing an Interactive Visitor Map (IVM) HTML5-based mapping application for the US Forest Service. This section 508 compliant application, accessible from the main Forest Service Website (http://www.fs.fed.us/ivm), allows the public to navigate and explore recreational opportunities on all Forest Service land throughout the US. IVM version 2.0 includes social media data (Twitter and Yonder) as well as other data layers (weather, InciWeb), and was developed using JavaScript technologies (AngularJS, JQuery, Dojo), as well as ArcGIS Server, and search engines (Apache Solr). Some of the data is accessed via JSON files that are generated using the Feature Manipulation Engine (FME) to increase performance of the application
- Developed and configured simple mapping applications using Geocortex
- Developed a Web application (https://maps.bouldercolorado.gov/emaplink) and fully configurable Web application template for the City of Boulder starting with ArcGIS Online (AGOL) configurable Web App template
- Developing high-end Network and Spatial modeling applications utilizing ESRI's geoprocessing/modeling framework and python scripting technology for support of ArcGIS Server applications
- Developing an ArcGIS Silverlight Viewer mapping application for the American Association of Petroleum Geologists (AAPG). The application will provide digital products and services to upstream petroleum

companies by preparing GIS-linked databases and atlases of georeferenced maps and other images for download and viewing

- Designing and developing Desktop and Server-based solutions for gas and electric utilities companies implementing many third party products such as Schneider Electric ArcFM (including Feeder Manager 2.0), and Cityworks Asset Management products
- Installed and configured ESRI's Geoportal Server application for the State of Colorado, and trained the Office of IT/State GIS Coordinator in its use
- Developing a wide range of ArcIMS web applications for an extensive list of customers including Level(3) Communications, Kiewit Network Services Co., NOAA/NGS, NRECA, Cities of Denver (Environmental Services Division), Commerce City, Boulder, and Baltimore, Weld, Howard, Washington County, Makivik Corporation, NREL, IHS Energy, OneOK, Remaps, and USFS
- Developing Route Manager tools for editing linear referenced telecommunications data, and complex address system tools utilizing MapObjects Java, ArcIMS, ArcSDE Java API and Java programming language
- Developing an environmental data editing tool, an Oracle database query and analysis ArcGIS extension, a County-wide Asset management system, an automated map sheet application and a metadata generation tool utilizing ArcObjects and VB6, a Geodatabase error checker utilizing ArcObjects and VB.NET, and a City-wide street/emergency management system utilizing ArcObjects and C#
- Designing and implementing ArcSDE/SQL Server geodatabase, including development of ArcGIS v10.0 Mobile applications for support of oil recovery and emergency response efforts in Gulf of Mexico Oil Spill disaster, and editing/GPS application for Oil and Gas clients utilizing ESRI's ArcGIS Mobile v10.2 SDK running on Windows-based tablets
- Providing Oracle, MS SQL Server and ArcSDE installation, management, administration, development, debugging and training while developing enterprise-wide ArcSDE solutions. Included complex Oracle and SQL Server query development and PL/SQL stored procedure development
- Custom programming supporting GeoDatabase design and ArcSDE implementation, automating data loading (ie., MapInfo/AutoCAD) and quality control utilizing tools such as FME, and creating specialized reports and interfaces matched to various user groups
- Developing a wide range of enterprise client/server applications utilizing leading edge technologies such as .NET, SOAP/REST/Web services, Flex and Silverlight technologies, Jakarta Struts framework, and Rational ClearCase/Apache Subversion/TortoiseSVN
- Acting as lead architect and developer for US Air Force GeoBase Desktop Toolkit ArcGIS Engine application and Air Force GeoBase CIP Checker application utilizing VB.NET
- Integrating OGC Web service applications with ArcIMS applications for dynamic rendering of map data
- Developing an Asset Management System for inserting, querying and updating County Engineers Department documents utilizing .NET, GeoDatabase and ArcObjects technologies
- Conducting detailed needs assessments and audits to develop various types of GIS design and implementation processes
- Developing optimal routing tools using RouteMap IMS (Beta 3) .NET API
- Providing ArcIMS/ArcSDE/ArcGIS/ArcGIS Server training and administration functions
- Designing and implementing GIS data models using UML for city and county government agencies
- Developing custom ArcGIS, ArcSDE, ARC/INFO, ArcView and Spatial Modeling and Analysis training classes for US Forest Service, NOAA, local government agencies, and university customers (certificate programs)
- Developing ArcView extensions and custom applications integrating Avenue scripts and Access databases supporting a telecom business development group conducting map-based forecasts of future potential for cable modem and DSL services
- Developing web site prototype of geospatial library using ArcSDE, ESRI's ArcIMS Beta 3 software, and IBM's DB2 database

GIS Engineer – *Research and Data Systems Corporation (MD), 1997-1999*
Provided GIS services to support USDA's Production Estimation and Crop Assessment Division (PECAD). This included extensive field work mapping post-production corn stalks, capturing GPS location data, building related attribute tables, developing field workflows, and training others in GPS. Using Avenue scripts and Sybase SQL Server, developed ArcView extensions designed to automate global agrometeorological database exploitation. Customized tools using Java, C and Avenue to dynamically chart the results of database queries. Developed spatial products with ARC/INFO and PCI software. Provided technical support and training to FAS and FSA employees. Developed web-accessible tutorials using HTML and integrated with GIS software. Presented paper at 1999 ESRI

International Users Conference. Received Administrator's Special Award for exceptional initiative, imagination and resourcefulness in the support of PECAD by providing essential tools for timely and efficient analysis of satellite imagery, meteorological data, agricultural statistics, and yield model results. Also received Award of Excellence for training work.

GIS / GPS Specialist – *US Forest Service (UT), 1996 Field Program*
Collected field data using Trimble GPS Pathfinder for wildlife and canal surveys and for updates to 7.5-minute topographic maps. This included walking, hiking, biking, and horseback riding various trails and protected areas, collecting field inventory data, GPS location data (point, trails, roads, and other "stream" or continually measured data), and adding or developing related attribute tables. Raw data was transferred to a field laptop, and differentially corrected using Pathfinder software, and eventually loaded into ARC/INFO. Working from Forest Service field offices, edited, digitized and queried map data using ESRI ARC/INFO and ArcView software for completion of data analysis on RS / 6000. Wrote AML and AWK code to process GIS files. Developed and provided GPS data capture and GIS operations training to Forest Service Biological Technicians.

Software Test Engineer – *H.L. YOH Company (CA), 1992-1994*
Led a team that tested and analyzed data for a satellite simulator running on a UNIX-based LAN. Developed tools for analyzing simulated satellite data using C and AWK programming languages. Tested Motif-based user interfaces. Designed and developed Dataview displays to help operators visualize simulated satellite data. Acted as Software Technical Advisor on contract to Lockheed simulation engineers.

Systems Engineering Specialist – *Advanced Software Resources Inc (CA), 1988-1991*
Designed, developed and tested telemetry database to be used by Mission Control team operating a then future satellite system. Led Database Design Reviews for customer representatives. Developed and presented training for satellite operations personnel. Generated simulation databases to support training. Provided configuration management and technical support for control software used by Unisys training organization.

Staff Engineer – *Infotec Development Inc. (CA), 1984-1987*
Developed and implemented instructional materials for operator training. Prepared and provided software release delta training for satellite operators. Budgeted and managed small programs. Received Award of Merit for Outstanding Achievement.

COMPUTER SKILLS

Languages:	Java, C#, VB.NET, C, VB, JavaScript, Ajax, DHTML, ActionScript, VBScript, Python, ArcXML, Avenue, SQL, AML, AWK, FORTRAN, PASCAL
Databases:	Oracle 11G/10G/9i, MS SQL Server 2012, PostgreSQL, Sybase, IBM DB2, MS Access
Web Technologies:	HTML5 (AngularJS, Dojo, jQuery, Backbone, Marionette, Underscore, Bootstrap), ASP.NET, Flex and Silverlight, ASP, JSP, Servlets, ColdFusion, IIS, Apache Tomcat, JRun, ServletExec, BEA WebLogic, JServ, Jakarta Struts

EDUCATION

B.A. Applied Mathematics, concentration in Industrial Engineering, University of California, Berkeley 1984
Commercial Java Training Certification, 1998
Sybase SQL Server Database Certification, 1997