

RISHIKESH MANDVIKAR

Software Engineer

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PROFESSIONAL SUMMARY:

Eight years of development experience in C#, ASP.NET, SQL. Specialties are Algorithms, Data Structures, Object-Oriented Design, and Design Patterns. Interested in Software Development and Testing in C#.

SKILLS:

Languages:	C#, Java, jQuery
Technologies:	Web Services, WCF, XML, ATOM, JSON, XSD, XSL, XSLT, REST, SAX, DOM, WDSL, SOAP, SSIS
.Net:	.Net Framework 4.5 - 2.0, Visual Studio 2012, ASP.NET, LINQ, LINQ-XML, LINQ-SQL, ADO.NET
Testing:	NUnit 2.6, Visual Studio Unit Testing, Moq 4.0, TDD
Databases:	SQL Server 2008, SQL, T-SQL, MySQL
Version Controls:	Git, SVN, TFS, TortoiseSVN, AnkhSVN, Surround
Operating Systems:	MS Windows Suite, Linux, UNIX

WORK EXPERIENCE:

Software Engineer
Cigniti Inc

Sep 2008 – Present
Irving, TX

• Houghton Mifflin Harcourt (HMH) Website Redesign:

- Rebuilt HMH website from ground up using C#, WCF, REST, .Net 4.0, Sitecore, jQuery, NUnit, Moq, Unity DI, TDD, MSMQ (Team: 7 Developers, LoC: 125k).
- Implemented a User Store as WCF service by extending ASP.Net Membership user store to perform account actions as create / update user, change / reset password, change email, etc.
- Participated in the system architecture design with Solutions Architect during early stages, quickly developed proof of concepts, performed pros and cons of tools and frameworks.
- Built a wrapper factory class around Unity Dependency Injection to choose implementations.
- Wrote 400+ unit and integration tests, followed TDD, used NUnit 2.6 and Moq 4.0.
- Implemented an Email Service to send out emails upon various user account actions. Used Reflection to replace tokens in email templates with values.
- Tuned WCF services by configuring service behaviors, binding timeouts, connections limit.
- Authored best practices documents for unit and integration testing, NUnit, Moq, Unity.
- Open-sourced numerous utility projects on GitHub (github.com/rmandvikar).
- Implemented user account pages as My Account, Create Account, etc. using jQuery.
- Authored documentation with workflow and dataflow sequence diagrams.
- Followed Agile / Scrum development method with Sprint cycle of 3 weeks.
- Wrote migration apps to migrate users from different ASP.Net Membership database stores.

• Reviews API for Samsung Products:

- Built a WCF REST API to be consumed by Samsung to display product reviews. Wrote an aggregator to aggregate reviews from different review sources (review sites, blogs); Used C#, .Net 4.0, REST, LINQ, MSMQ, LINQ-SQL (Team: 4 Developers, LoC: 25k).
- Created mocks (stubs) for unit and integration tests, used Test Driven Development (TDD), Tools used NUnit 2.6 and Moq 4.0.
- Implemented APIs to support parameters as page and page-size, filtering by review type, liking and disliking reviews, previous and next page URLs.
- Used MSMQ for asynchronous processing to avoid database contention and achieved 2x faster run times; Serialized objects using DataContractSerializer XML serialization.
- Used LINQ-XML, XmlReader to parse large XML feeds (10-100MB).
- Used Microsoft's Provider pattern for Cache Provider (wrapper around ASP.Net internal cache) and Log Provider (wrapper around log4net).
- Built a test client for unit tests, scalability, stress, performance tests of the REST API.

- **Payroll and Employee Management System:**

- Developed payroll processing business tier logic for payrolls using C#, .Net 3.5, LINQ, LINQ-SQL, TDD, NUnit 2.5 (Team: 4 Developers).
- Reduced processing time by a factor of 8 in comparison to the legacy system.
- Developed an efficient approximation algorithm for payroll processing by identifying a problem similar to the NP-complete Knapsack problem.
- Used design patterns for extensibility and code reuse.
- Followed Microsoft Solution Framework models (Governance Model, Team Model) for project timeline releasing iterative builds (sprint cycle of 3 months) using Agile methodology.
- Mentored peer developers on LINQ, design patterns, data structures, algorithms, SQL, SVN.
- Gathered requirements from business users, project stakeholders and documented them.

- **AdGiants MODsocket Marketing Store:**

- Enhanced a small business marketing store for buying customized ads through direct mail, email and twitter campaigns; Used C#, .Net, jQuery (Team: 5 Developers, LoC: 325k).
- Created a C# library by wrapping Adobe CS5 InDesign JavaScript API for performing preflight validation of InDesign documents and creating customized PDF and JPG files from InDesign templates with customization variables as XML.
- Used Google Analytics for site traffic and performance tracking.
- Built web pages using jQuery for rich UI from wireframes and content documents from IA.

- **ETL Application for Real Estate Data:**

- Implemented an ETL application for extracting real estate data from legacy system using OLE DB provider and loading into SQL using C#, .Net 4.0, SQL 2008, N-tier, LINQ-SQL.
- Used a batched ETL approach and cached lazy-loaded objects for performance.
- Used Reflection to copy values between two instances with 150+ fields to avoid lengthy code.
- Heavily used Extension Methods to write utility code for easier code maintenance.

Software Engineer at Lamp Technologies LLC, Dallas, TX:

May 2005 – Aug 2008

- Developed a web application to pull and save daily prices (quotes) of financial instruments using C#, ASP.NET, N-tier, ADO.NET, REST, XML, and SQL.
- Developed a multi-threaded system for calculating VaR (Value at Risk) using third party vendor SDK in C#, ASP.NET, ADO.NET, and SQL.
- Software Engineer Intern (May 2004 – May 2005).

EDUCATION:

Southern Methodist University, Dallas, TX, USA.

August 2003 – May 2005

Master of Science in Computer Science

Mumbai University, Mumbai, India.

August 1998 – June 2002

Bachelor of Engineering in Computer Science

PERSONAL PROJECTS:

github.com/rmandvikar

- Utility collection of C# extension methods for types as Enum, IEnumerable, String, etc.
- Trie data structure implementation in C#.
- Website clone of 2048 game in JavaScript, jQuery.
- JavaScript rule using on{X} Android JavaScript API to notify about shallow battery discharges.
- C# implementation to replace tokens in email templates using reflection.
- C# MSMQ component to send/receive items.
- Helper method in C# to use WCF service client object as per MSDN guidelines.
- Maintainable and flexible password validator in C#.
- C# Encryption and Decryption wrapper using AesManaged.
- C# logger using log4net.

ACADEMIC PROJECTS:

- Exam Scheduling project: Used Graph-coloring concept for scheduling in Java.

PAPERS:

- Presented a term paper on "Concurrency Control in Distributed Databases" for an in-class seminar.
 - Presented a term paper on "Google File System" for an in-class seminar.
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