Software Engineer
Seattle WA
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RISHIKESH MANDVIKAR

www.github.com/rmandvikar

TECHNICAL SKILLS

- Languages: C#, Java, Shell, Python, jQuery, JavaScript
- Web Services, REST, .Net, ASP.NET MVC, WCF, XML, JSON, SQL, Entity Framework, LINQ-SQL
- Visual Studio, NUnit, MSTest, Moq, TDD, HTML, CSS, Git, SVN, TFS, Windows, Linux, Unix

EMPLOYMENT

Senior Software Engineer   **CommerceHub**   **Aug 2016 – Sep 2017**

Product Catalog Team, DemandStream:

- Developed components to consume merchant product feeds and showcase on product catalog website. C#, MVC, Web API, REST, .Net 4.6, Elasticsearch, AWS, MSMQ, NuGet, Git, MSTest, JSON.
- Elasticsearch POC. Designed component to push to, query from Elasticsearch using NEST library. Configured AWS stack using CloudFormation, AWS CLI. Product catalog size of 30 million and 1TB of data.
- Heavily involved in splitting the monolithic repository into components with their own NuGet packages.
- Designed and implemented component to process data quality issues for products using MSMQ.
- Provided design direction, performed code reviews, advocated best practices, mentored peers, Git ninja.

Software Engineer   **Cigniti Inc**   **Sep 2008 – Aug 2016**

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.
- Implemented a User Store as WCF service by extending ASP.Net Membership user store to perform account actions as create and update user, change and reset password, change email, etc.
- Designed the system architecture with Solutions Architect during early stages, quickly developed proof of concepts, performed pros and cons of tools and frameworks.
- Built a wrapper factory class to choose implementations using Unity Dependency Injection (DI) at runtime.
- 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.

Omni Hotels Website Redesign:

- Rebuilt Omni Hotels website from scratch using C#, .Net 4.0, Sitecore 7, Solr, jQuery, NUnit, Unity DI, MSMQ.
- Created Sitecore templates as per Wireframes and implemented web controls.
- Used Solr to index and search Sitecore content items as Hotels, Destinations, Specials.
- Consumed REST web services for Weather, YouTube, Instagram using RestSharp library.
- Used Microdata for tagging content on pages to show rich snippets in search results.
- Implemented content translation within Sitecore using Clay Tablet and Lionbridge API.
- Configured Google Custom Search Engine (CSE) for site search.
- Wrote unit and integration tests, used NUnit 2.6.
- Followed Agile / Scrum development method with Sprint cycle of 3 weeks.

Reviews API for Samsung:
- Used by Samsung for reviews on 15 countries. Used C#, .Net 4.0, REST, LINQ, MSMQ, LINQ-SQL.
- Designed and implemented WCF REST API to be consumed by Samsung to display product reviews.
- Wrote a Feed Aggregator to aggregate product reviews from different review sources (review sites, blogs).
- 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 reduced time by 50%; 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.

NFP Website Redesign:
- Rebuilt NFP website using C#, ASP.Net MVC 5, .Net 4.5, jQuery, AngularJS, JSON, REST.
- Created flexible system architecture to work for URLs with any level depth using common MVC Views and Partial Views and to save page content in JSON files with caching.
- Used MVC's Attribute routing for easier routing maintenance.
- Used MvcSiteMapProvider tool for menus, generating sitemap.xml with custom dynamic links, page's breadcrumb, page's robots meta tag, page's visibility in sitemap.xml and breadcrumb, and highlighting of active menu item.

Payroll and Employee Management System:
- Developed critical payroll processing business logic using C#, .Net 3.5, LINQ, LINQ-SQL, TDD, NUnit 2.5.
- Reduced time by 80% in comparison to the legacy system.
- Developed an approximation algorithm for a problem similar to Knapsack problem to process payroll deductions. Reduced time from $O(2^n)$ to $O(n)$.
- 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.

Software Engineer	Lamp Technologies LLC	May 2005 – Aug 2008
Software Engineer, Intern	Lamp Technologies LLC	May 2004 – May 2005

EDUCATION

M.S. Computer Science	**Southern Methodist University**	**Aug 2003 – May 2005**
B.E. Computer Engineering	**Mumbai University, India**	**Aug 1998 – Jun 2002**

GITHUB PROJECTS
- **C# Extension Methods**: Utility methods for types as Enum, IEnumerable, String, etc. C#
- **Trie**: Trie data structure implementation. C#
- **Git Shell Setup**: Git hooks system (global, local hooks), utility shell scripts, configuration for HOME dir. Shell
- **2048 Game:** Website clone of 2048 game. JavaScript, jQuery
- **Shallow Battery Discharge:** Rule using on{X} Android JavaScript API to notify user. JavaScript
- **Email Template Replacer:** Implementation to replace tokens in email templates using reflection. C#
- **MSMQ component**: Implementation to send and receive items using MSMQ. C#
- **Logger:** Logger wrapper using log4net. C#