

78, 79, Kanji Nagar  
Near Balti Factory, Agra Road  
Jaipur, Rajasthan  
India – 302031

RUBAL WALIA

(091) 99288 93416  
[walia.rubal@gmail.com](mailto:walia.rubal@gmail.com)  
[waliarubal.github.io](https://github.com/waliarubal)

9+ years of software engineering experience in development of desktop applications for Microsoft Windows operating system using .NET Technologies (WPF, WinForms & UWP). Also having hands on experience in development of web SPAs and cross platform desktop apps using Angular and Electron. Author of several open source tools and libraries which can be found on GitHub (<https://github.com/waliarubal>).

## EMPLOYMENT

**Senior Software Developer**                      **Dotsquares Technologies India Pvt Ltd**                      **September 2017 - Present**

TicketSearch (<https://www.ticketsearch.com/>)

- Working as software developer for Tix Technology Pvt Ltd (Australia) responsible for applied research and development of modules required for online ticketing system.
- Created an Angular 6 seat-map builder component for designing layout plans for reserved seating using SVG technology harnessing SVGJS library. Created another canvas component using KonvaJS for end users to pick seats in sales process.
- Created cross platform (Windows and Mac) printer bridge desktop application in Java 8 to communicate with web API after receiving commands from web browser via register URI approach.
- Communicated with Boca Thermal Ticket printer to print event tickets. Also communicated with standard printer to print PDF documents.
- Created library to generate ticket PNG images to be sent across as Base64 strings. Ticket template definition was read from JSON; containing shapes like rectangle, text, barcodes, QR Codes, lines, etc. for 200 and 300 DPI image generation.
- Created cross platform installation setup for printer bridge using Install4J including authoring of custom actions to register custom URI handler for Windows and MacOS.

NFS Workspace – Outlook Add-in Installer

- Worked as software developer for NFS Technology Group (United Kingdom) responsible for creation of installation program to install NFS Workspace's add-in inside Outlook 2007, 2010, 2013 and 2016 (both x86 and x64 Outlook installations).
- Used InstallShield 2016 (SP2) for creating installer and .NET 4.0 for creation of managed custom actions for registering add-in using VSTO solution installer, clearing ClickOnce cache, removal of startup entries of legacy installer, removal of un-installation entry from Add/Remove Programs, manifest signing, detection of installed Outlook versions, addition of add-in to inclusion list and setting of MSI properties.
- Created a background application to run at machine startup to perform add-in configuration.
- Assisted NFS to purchase Authenticode digital certificate and setting up build server.
- Created build script (Windows batch file) to sign binaries, build installer and sign generated installer using digital certificate.

Re-Fuel

- Worked as Senior Software Developer for iRiS Software Systems Ltd (United Kingdom) responsible for creating food ordering kiosk application (Universal Windows Platform) to be deployed on Microsoft Surface tablets.
- Key responsibilities include client interaction, inter-team coordination, third party API integration, creation of unit tests and work delegation.
- Created API client to integrate Google Analytics for telemetry data collection.
- Integrated pin-pad based Elavon payment gateway and Epson thermal printer for receipt printing.
- Integrated LightSpeed and GXP property management APIs.
- Worked on UI creation & testing along with development of app specific custom controls for data input.
- Regularly reviewed code-base and did improvements whenever needed to meet standards laid by client.

**Senior Software Engineer**                      **Girnar Software (SEZ) Pvt Ltd**                      **September 2013 – August 2017**

AlertFind (<https://www.aurea.com/alertfind-promo/>)

- Worked as Senior Technical Consultant for Aurea Professional Services (United States) responsible for

creating various third-party connectors to import roster data inside AlertFind system.

- Created configuration panel for configuring console-based connectors (made in Java). Console allowed end user to configure Active Directory, Salesforce, SAP ERP, Remedy Action Request System, PeopleSoft and Workday connectors.
- Created background windows service to host connectors and perform data synchronization on the basis of configurable daily schedule.
- Prepared end user help manual and assisted Aurea support in installation & configuration of connectors on Test & Production environments.
- Created a self-hosted WCF based REST service to act as wrapper over AlertFind's roster import SOAP API to facilitate customers which only allow REST based solutions in their environment.
- Created InstallShield LE based installer program to install dependencies (JRE & .NET 4) as well as connector in customer environment. Created InstallShield custom merge module to include latest JRE as setup dependency.

WinDoc – Version 2017.x (<https://github.com/waliarubal/Janitor>)

- Working as architect and developer responsible for planning and authoring (an open source) Windows OS based multi-lingual performance optimization utility.
- Implemented addin based cleaning mechanism supporting run time modules injection and automatic update.
- Implemented startup entries manager, software updater (automatic & manual), scheduled scanner and client server based license mechanism to prevent software piracy.
- Made application backward compatible with Windows XP allowing it to run on Windows XP (SP2 +), Vista, 7, 8, 8.1 and 10. Both 64 and 32 bit operating systems supported.
- Created custom themed UI from scratch which supports localization.
- Program bug fixes based on errors reported by customers and QA.
- Created installer program using InstallShield LE responsible for installing pre-requisites and software itself.

Everest Advanced Edition – Version 6.x and 7.x (<http://www.everestsoftwareinc.com/product/everest-version-6/>)

- Worked as Senior Technical Consultant for Versata Professional Services (United States). Key responsibilities include handling various phases of software development lifecycle including requirements gathering, requirements & help document preparation, coding, testing and deployment of the developed customizations.
- Indulged in direct communication with various clients (including ITAR/EAR clients) via ZenDesk ticket updates, telephonic calls and GoToMeeting sessions.
- Developed several utilities, reports (using SAP Crystal Reports) and Everest add-ins based on customer needs and deployed them on customer servers with current overall customer satisfaction rate of 97%.
- Developed certain shared libraries for data reading from Excel, Brandwise files, DBF files, databases and other data sources. Also worked on writing wrapper methods for Everest software API's to work with .NET. Created a generic VS installer project for utility and add-in deployment. All the development is done on machines hosted on Amazon cloud.
- Acted as core team member in development of addin based data archiving/restoration utility for Everest's database.
- Worked on creation of web based lite version of Everest optimized for tablet PCs. Web version talks to Everest SDK installed on the server to get its job done.
- Worked on architecting and creation of a rebate contracts management tool which also required handling a team of 3 developers and 2 QAs.
- Created configurable one click installation executor to assist support team to perform automated software installation on customer systems. Executor handled backing up of customer database, checking pre-requisites, software installation, license activation, post-installation cleanup and installation verification.

Catalyst Analysis Suite – Version 2.0 (<http://www.catalyst-int.com/software-page1.html>)

- Worked as software developer for overseas client (New Zealand) and studied existing application's behavior to identify flaws in system and possible improvements. Created UI framework using WinForms supporting themes (based on free Krypton toolkit), form-based access rights, data import \ export from various sources (Excel 2003 – 07, IBM SPSS Statistics and SQL Server), data transfer mechanism, crash reporting and end user license management.
- Removed dependency on Excel & Power-point interop by using free NPOI library and writing custom

- method to read very large excel sheets (greater than 2GB) via SAX approach and deferred data loading.
- Enabled application to auto install dependencies (SQL Server LocalDB 2014 and Office 2007 Runtime) during startup if missing.
- Did performance profiling using Ants Performance Profiler to identify bottlenecks and did code refactoring to remove them. Also implemented result catching based on inputs to decrease consecutive output computation time.
- Created InstallShield LE based software installer. Created InstallShield custom merge module to include SQL Server LocalDB as setup dependency.

SQL Compliance Manager – Version 4.4, Version 4.5 and Version 5.0

(<http://www.idera.com/productssolutions/sqlserver/sqlcompliancemanager/>)

- Worked as software developer for Idera Software (United States) to work on their product SQL Compliance Manager.
- Added support for monitoring SQL Server 2014 instances and auditing SQL Server 2014 databases.
- Enhanced SQL instance registration wizard by adding permission check step. This wizard step evaluates machine for necessary permissions and presents end-user with any failing permission requirements and ways to fix them.
- Improved scheduled repository archiving by adding scheduler to execute automated repository archives to specified archive database drive. Scheduler was coded to support daily, monthly, weekly or monthly archiving.
- Added SNMP notification to send alert trap messages when critical SQL Server data or audit events occur.
- Added support for capturing Server Start-Stop events by adding logic to process and extract relevant events from SQL Server default trace.
- Implemented plug-in for Idera Common Web Framework which hosts WCF service acting as a communication bridge between application data repository and new web application UI.
- Added license checking mechanism in existing application's InstallShield based installer by writing managed custom action assembly using C#.
- Created WiX Toolset based integrated installer responsible for handling plug-in registration and installation of Idera Common Dashboard locally if missing.

SQL Virtual Database – Version 2.1 (<http://www.idera.com/productssolutions/sqlserver/sqlvirtualdatabase/>)

- Worked as software developer for Idera Software (United States) to work on their product SQL Virtual Database.
- Added support for mounting SQL Server 2014 backup files.
- Improved installed SQL server detection process for local and cluster installations.
- Increased responsiveness of various UI forms by performing long running tasks in background threads and fixing several defects.

**Software Developer, Applied Research**      **Incognito Technologies Pvt Ltd**      **April 2010 – September 2013**  
Panama WSGP Management System

- Studied silo bag bagging process and authored two tier desktop application using WinForms to monitor and carry out various operations in Grain Park for warehousing of wheat.
- Authored an image capturing control to facilitate monitoring of trollies going through the Gate-In and Gate-Out processes. Also coded API to communicate with weighing bridge via serial port for retrieval of trolley weights.
- Installed and maintained application over four different remote Grain Park sites in Madhya Pradesh, India (Shipra, Shivpuri, Bamori and Katra) also providing necessary training to operators regarding proper application usage.

Mera Khata ([www.merakhata.com](http://www.merakhata.com))

- Authored a Silverlight grid control from scratch for displaying and printing formatted data. Also, data could be emailed and exported as HTML, PDF or excel document. Operations like drag-drop and theming were also incorporated.
- Authored a file upload-download control for storing documents and images in Amazon S3 servers supporting files >25MB. Image cropping tool based on custom aspect ratio was also coded.
- Implemented a WCF service for user registration and verification by email. Also (per user) SQL server database was created and associated with verified user account.

## BizBook AC CRM

- Implemented Silverlight enabled WCF service for querying Google Geo Location API to determine coordinates based on supplied address, bulk messaging (SMS) function and large SQL query result set transmission between service and Silverlight applications.
- Authored a Silverlight map control based on Google static map API. Functions like zoom, multiple map markers and directions finding were also coded.
- Provided Silverlight based reporting solution by setting up Telerik reporting web service and also authoring a control for form based automatic report selection and loading. Generation of reports based on dynamic data tables was coded.

## Appfloat ([www.appfloat.com](http://www.appfloat.com))

- Designed and authored a Silverlight based designer (DSB) for creating project designs (for company based ORM referred as ORM Forge) using tables and relationships. Support for multiple diagrams, master-detail tables, automatic relation creation just by column type specification, projects gallery, error notifications, etc. were coded. Also optimized project design loading algorithm by implementing parallel source file parsing and deferred loading. DSB completely replaced use of SQL server management studio's diagram designer for creating project designs by taking care of ORM database rules.
- Implemented a console windows application to pool for, generate and alter databases based on project designs stored in XML format. Also generated databases were fed to ORM forge for generation of WinForms based desktop app codes which were compiled, packaged and were downloadable via DSB. This saved a lot of manual work in app. generation.
- Played a key role in rewriting ORM forge to generate Silverlight based web apps by authoring various controls, writing control templates and educating co-developers to migrate from WinForms to Silverlight code writing.
- Authored a bulk mailing application for sales team in order to carry out their e-mailing campaigns. Application supported multiple email accounts, selective and scheduled mail sending, mail attachments, sent status and contacts management reducing their dependency on MS Outlook.

## The Syncline

- Built application's UI using WinForms. This application was used for inventory management and bulk listing over shopping carts like eBay, Amazon, Price Minister and Fnac. Application was also used for managing orders and billing.
- Studied eBay Trading API and Amazon Merchant Seller API; helped co-developer in building Java based console app for inventory synchronization. Also developed mechanism to interface WinForms based desktop app with java-based console.
- Created InstallShield based installation program for the application.

## God Speed FTP

- Authored a local and remote file system browser with UI similar to FileZilla FTP client. This component worked over FTP, FTPS and SFTP protocols to communicate with remote servers. Used Chilkat FTP library for .NET to server as the basis for this project.
- Wrote and implemented algorithm for responsive UI while active transfers using multi-threading. Also wrote mechanism for scheduled file and directory download-uploads. Transfer logs were also maintained.
- Implemented automatic starting of FTP client with startup of computer system and timed shutdown on download/upload completion.

## Software Engineer, Trainee

## KeyPrompt Technologies Pvt Ltd

### SmaFinAtt (Smart Fingerprint Recognition Attendance System)

- This was an attendance management Windows desktop application built to work with biometric fingerprint-based attendance machines. Interfaced this application to read attendance from machines (powered by ZKSoftware Biometric terminals) via COMM port, USB and Ethernet.

### SuJaWo (Sun Java Worker)

- Implemented a lightweight Java IDE using WinForms. This IDE supported MDI as well as tabbed document interface with customizable color schemes (for code coloring).
- Wrote string matching-based algorithm to implement syntax highlighting (code coloring).
- Wrote codes to detect and invoke Java compiler from within the IDE in order to compile and execute code files. This added to UX of IDE by removing need of compiler invocation from command line.

## EDUCATION AND AWARDS

- Secondary from Seedling Public School, Jaipur RJ (Affiliated to Central Board of Secondary Education) in the year 2004.
- Senior-Secondary from Seedling Public School, Jaipur RJ (Affiliated to Central Board of Secondary Education) in the year 2006.
- Bachelor of Technology in Computer Science and Engineering from CompuCom Institute of Information Technology and Management, Jaipur RJ (Affiliated to Rajasthan Technical University, Kota RJ) in the year 2012,
- Won excellent participation award for programming in Enigma 2009 organized by Kautilya Institute of Technology & Engineering & School of Management, Jaipur RJ.
- Was awarded conciliation prize in Neuron 2008 in coding competition organized by Malviya National Institute of Technology, Jaipur RJ.
- Was awarded Highest Proficiency Card for scoring highest marks in Information Practices in standard XI.
- Microsoft Certified Technology Specialist in .NET Framework 4, Windows Applications (Certification Number: D279-9599)

## LANGUAGES, TOOLS AND TECHNOLOGIES

**Proficient:** C#, WPF, WinForms, Silverlight, WCF, Microsoft Visual Studio, SQL Server Management Studio, Microsoft .NET Framework, DotPeek, TypeScript, Angular 6+

**Intermediate:** Universal Windows Platform (UWP), VB.NET, Mono Framework, Git (GitHub, BitBucket), SVN, Agile Methodology, T-SQL, PL/SQL, Software Design Patterns (MVVM, MVC, Singleton, etc.), Mono Develop (Xamarin Studio/Visual Studio for Mac), InstallShield, Microsoft SQL Server Profiler, Smart Assembly, Desktop UI Toolkits (from Infragistics, DevExpress, Component Factory, Telerik, Xceed, etc.), SQLite, Entity Framework, ASP.NET Web API, SVG (SVG.JS), Visual Studio Code, Azure Data Studio, Electron

**Beginner:** JavaScript, HTML, CSS, jQuery, Team Foundation Server, WiX Toolset, Jenkins, NAnt, xUnit, NetBeans IDE, SAP Crystal Reports, NodeJS, Microsoft .NET Core, MongoDB, Azure DevOps, Java, Install4J, Linux, ZenDesk, MySQL Workbench, Active Directory, Dapper

# Microsoft

## CERTIFIED

Technology Specialist

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.NET Framework 4  
Windows Applications