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## EXPERTISE

- **More than 10 years (one decade)** of technical coordination and development experience in the client/server applications and web Mobile based.
- Specialized in **Email Archiving Solutions, Digital Image Processing, Biometrics, CRM, CMS, ERP, E-Commerce, Business Process Applications, Satellite Communication.**
- Have been involved in complete SDLC, from requirement elicitation to deployment including UML Modeling, Use Cases and UI Design
- Well versed in Object Oriented Design and implementation, Process Mapping/Modeling and KPI Reporting.
- Have **2 years** of experience with MS Exchange level products using EWS, MAPI, ExMAPI, CDO, CDOEX
- **5 years** developing experience in .NET (ASP.NET, C#, VB.NET, ADO.NET)
- Have database programming expertise with MS Access, SQL Server 2000/2005/2008 R2, Oracle 11g Express Edition, PostgreSQL and MS Exchange Mailing Databases, Multi modal Biometrics Databases.
- Experience of working with third party components, Web Services, Windows SharePoint Services, Amazon
- Have experience to complete SRS documents, Release Notes, Weekly Reports, Bugs Status Reports, User Manuals
- Enterprise level Research work skill set.
- Embedded & Real time applications.

## PROFESSIONAL EXPERIENCE

**enterprise Resources And Solutions (eRAS)**  
**enterprise Research And Solutions**

**July 10 to date**

### **enterprise Resources Research Solutions (eRRS) – Registered as Private Limited in 2021**

- In a process to compile **eBio & eSat** products.
- **Professional** Member of the **ISoc** (Internet Society) - Member ID: 120271.
  - Participated '**INTERNET GOVERNANCE WORKSHOP**' in the October 2015, jointly organized by HEC Pakistan, NTU, ICANN, APNIC, ISOC.
- Worked as an **Entrepreneur** with the **Open Islamabad** Forum.
  - Participated **Annual Entrepreneurship Conference** LCL 2015 & LCL 2016 organized by 'Entrepreneurship Development Institute (EDI)'.
- Completed Research & Development on the Fingerprint device '**Suprema BioLite Net**' for a local software company for their Government based clients.
- Involved to convert binary MS SQL SERVER db images to WSQ format and also worked on Suprema BioStar SDK1.52 and APIs for a CSharp to customize existing client/server applications according to client requirements.
- Developed Demo utility using ImageSDK
- Worked on 'BioEntry Plus' CSharp SDK and WSQ library to convert fingerprint images into different required formats
- Completed '**Uppal's Web Clinic** (<http://www.uppalsclinic.com/login.aspx>)' CMS using MS VS 2010 Ultimate and MS SQL Server 2008 R2. Involved during Requirements gathering, design, implementation, deployment and technical support to client. Note: Login credentials will be available on request.
- Completed **MSF Sweden Association** ([www.msfsassociation.se](http://www.msfsassociation.se)) 'Content management System', involves taking requirements, development, testing, deployment, training and technical support. CMS developed using

RAD tool 'Duple 6.0/1' and web server 'WAMP 2.0'. Note: **Login credentials** will be available on request to browse modules of the above CMS.

- GPS location based Ringing Alerts Mobile Application for the Android plate-form supporting up-to Version 4.4 KitKat.
- SMS communication to control Electric Home Appliances for the Android plate-form.
- Android Apps for the Vehicle Tracking & Fleet Management System (Supporting up-to Version 4.4 KitKat).

**Worked with DRL (Pvt.) Ltd. (<http://www.drl.com.pk/>) team including their Developers, QA & Implementation team members from March 2013 to January 2014 as a Team Lead (ERP Implementation)**

- Worked on OpenSource ERP **HoneycombERP®**
  - HRMS
  - Financials
  - Procurement & Inventory
  - Manufacturing/Production
- **Tools:** JBoss, PostgreSQL, Eclipse/JRocket (jdk1.4 – 1.7, JSF 2.0), Visio, TortoiseSVN, JIRA, MS Project Plan, Evolus Pencil.
- Directly involved to lead Implementation team for the deployment and coordination with their potential local clients. Tasks were related to preparation of Project Plan, Implementation Guide, Installation/Configuration of HoneycombERP®, workflows designing, supervision of QA reports, User Manuals and marketing material preparation with updated features list of above mentioned ERP modules, Technical Support.
- Established/Built ERP Implementation Department for their OpenSource ERP **HoneycombERP® product including comprehensive compilation of the ERP Implementation Guide.**

**As a Freelance member** across the globe completed given below CMS based websites using RAD tools: WordPress, Duple

- <http://www.afnausa.org/>
- <http://afnausa.org/wp/>
- <http://iisnj.org/>
- <http://iis-school.org/>
- [www.technoemirates.net](http://www.technoemirates.net)
- [www.exceed.pk](http://www.exceed.pk)
- [www.hq.com.pk](http://www.hq.com.pk)
- <http://headquarter.pk/>
- [www.muslimabroad.org](http://www.muslimabroad.org)
- <http://dcjerseyworks.com/>
- <http://www.timetechnologiesinc.com/>
- <http://www.MecGlo.com/>

**Worked with Interactive Group (<http://iacgrp.com/>) team from April 2012 to Nov 2012 as a Software Engineer** to train their Developers and the Configuration/Installation team for the products related to the Biometrics.

- Compiled complete Biometrics solution including following modalities: FingerPrint, Facial, IRIS, Palm and Voice.
- Developed Biometric Open Source Solution using Libraries (SourceAFIS, WIA, EmguCV, AForge Dot Net, OpenCV).
- Customized Neuro Tech Mega Matcher Extended SDK and compiled ABIS.
- Customized Biometric application using Free Fingerprint Verification SDK.
- Having knowledge of NIST/ANSI standards of Biometrics with Image Enhancement Algorithms.
  - Tools Used: C#, Oracle 11g Express, SQL Server 2008, SQL Lite.
- Compiled two research papers related to AFIS (Automated Fingerprint Identification System) with their iResearch business unit.
  - Plug-n-Play AFIS Development for Criminal and Civil Applications

- How to Build an Automated Fingerprint Identification System

**Worked** for the 'Spearcom Technologies' Products.

**Worked** for the 'Digital Wisdom' Industry Solutions.

**Worked** for the 'EnTech Private Ltd' Research Methodologies.

**Working** on Android Mobile Applications and the Apple MAC Solutions iPhone.

I. Mapple

II. Al-Imran

III. eCyber

IV. elloT

V. eCrackers

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**Virtual Code Solutions Limited, Islamabad**

<http://www.virtualcode.co.uk>

**Nov 08 to June 10**

Project Coordinator

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VCSL is a world-leading Email Archiving Solutions providing company, most of the clients are in Europe. I joined VCSL as a Project Coordinator. I was responsible to do analysis, design different modules, coordination with development and testing teams to implement/code these modules and perform testing eventually. A lot of direct client interaction: technical documentation, conference calls and emails/ chatting, involved during the requirement elicitation, deployment and technical support after successful release of products.

**Project: CryoStubbing Server/Client**

Cryoserver ([www.cryoserver.com](http://www.cryoserver.com)) uses an exchange functionality called JOURNALING which ensures a copy of every mail internal/external sent/received is copied and sent to Cryoserver, Cryoserver stores the mail permanently and allows users to search for their mail using an easy to use interface (because every mail and the attachments are indexed) since the mail exists in two places i.e. exchange and cryoserver. We introduce a new functionality called stubbing, the stubbing application will allow administrators to manage their storage by using the stubbing application on Exchange2003/2007.

**Environment:** Visual C#, VSTO 2005, MS Windows Advance Server 2003/2008, MS Exchange 2003/2007, SLES 10.1, Windows XP/Vista/Win7, MS Outlook 2003/2007

**Project: Cryo MailBox Exporter**

Export emails (RFC & Enveloped) from Exchange 2003/2007 to Cryoserver (SLES10.1) using Exchange journal account or spool directory options. Developed using Exchange Web Services (EWS) and CDOEX

**Environment:** Visual C#, MS Windows Advance Server 2003/2008, MS Exchange 2003/2007, SLES 10.1

**Project: CryoStubbing OWA**

Customize OWA Exchange 2007 to access and browse stubbed messages. Exchange level development completed by using EWS using proxy classes.

**Environment:** ASP.Net, MS Windows Advance Server 2003/2008, MS Exchange 2007 SP1, SLES 10.1

**Project: PST Importer**

Import emails from PST file to .msg/.eml format and also export to Cryoserver for remaining functionality. Application developed using Redemption API.

**Environment:** VB.Net, MS Windows Advance Server 2003/2008, MS Exchange 2003/2007, SLES 10.1

Compiled relevant work to make compatible above products with latest Microsoft releases **MS Exchange 2010 and MS Outlook 2010**

Documented initial proposal for the 'Document Archiving Solutions' using MS SharePoint 2007/2010 and completed required R&D including installation, configuration and development environments.

Currently, they launched product with the name ShareArchiver ([www.sharearchiver.com](http://www.sharearchiver.com)).

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**NCHD (UNDP), Islamabad**

<http://www.nchd.org.pk>

**July 06 to Oct 08**

Assistant Manager (Software/Web)

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NCHD (UNDP) working in 108 cities of Pakistan and having almost 80,000 employees in Pakistan and USA. At that time, NCHD had 32 board members on their panel from all over the world.

I joined UNDP (NCHD) as an Assistant Manager. I was responsible to do analysis, design different modules, supervise and manage team to implement/code these modules and perform testing.

Interaction with Board members of UNDP (NCHD) all over the world for gathering of software requirements and managed Marketing/PR applications correspondence with them and interaction with regular employees for feedback on HR/Admin applications and then changes in running applications accordingly.

**Project: NCHD Human Resource Application**

This system is developed for catering current and future requirements of NCHD (National Commission for Human Development) and has capability of enhancement for the futuristic technological point of view. The Key Modules of this system are Employee enrolment, educational record, previous working experience, payroll, overtime calculation, TADA reimbursement, medical reimbursement, performance appraisal, posting and promotion history, skill development, disciplinary action history, leave management, consultant record, loan record and recovery schedule, employee insurance record.

**Environment:** ASP.Net 2.0, C#, Java Script, MS SQL Server 2005

**Project: Customized application for NCHD Marketing Team**

Application covers all the interaction with national and international key donors, board members and related government officials to send and receive newsletter, tri folds, invitations, confirmations, press clippings and all other corresponding material by using mass mailing procedure and also keeps track of all the correspondence with individuals.

**Environment:** ASP.Net 2.0, C#, Java Script, MS Access

**Project: NCHD Website (<http://www.nchd.org.pk>)**

Developed official website for the 'National Commission for Human Development', the site has guestbook, e-newsletter manager, Job bank, online donations, marketing kit and news archive.

**Environment:** Classic ASP, Java Script, MS Access then Shift to ASP.Net 2.0.

Attended **Annual Strategic Retreat 2008** (NCHD-UNDP Board Members Meeting) in Abu Dhabi from 11<sup>th</sup> Feb to 17<sup>th</sup> Feb 08. That was hosted by NCHD –UNDP senior board member Sheikh Nahayan Al-Mubarik.

Shared HR/Marketing applications working in the region of Pakistan for the year 2007-08 including Monitoring/Evaluation data.

**CircleOne Telecom (Pvt.) Ltd., Islamabad <http://www.circleone.com.pk>****Oct 04 to June 06****Software/Web Developer**

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CircleOne Telecom is a subsidiary of PTCL and working on PTCL SMS PLUS services which include SMS from landline to landline, landline to Mobile, Email from landline. I was involved in complete **SDLC** (Software development Lifecycle) procedures, while more of the time was spent in development. My job responsibilities were management of Call centre (at application level), dynamic website, PBX management report generation and detailed reporting of main SMSC which was handling 5.6 million PTCL customers with their daily hits in millions.

**Project: CRM for PTCL SMS PLUS Call Center**

It was based on two major modules 'Agent console' and 'Management console'. Agent application interface is operated by CSRs, to handle the queries of valued customers providing information related to available services about products. Interface manages customer complaints as well. On the other side, Management console application is for Call Centre supervisor to manage database of CRM through customizable user interface.

**Environment:** Classic ASP, Java Script, SQL Server 2000

**Project: Reporting of PTCL SMS PLUS Database**

The system was able to generate reports on monthly as well as daily basis against each customer, individual city and 17 defined regions of PTCL in Pakistan. Also facilitate PTCL billing management and network support teams with graphical representation of SMS traffic in each city and PTCL regions up to hourly basis.

**Environment:** NET Framework 1.1, Visual Studio.NET, Visio, UML, SQL Server2000, Windows Server 2003

**Project: Development and Management of PBX at Application Level**

The primary requirement was to generate bill against each local phone extension by using specific date range on all available phone lines. Developed module was **PBX Parser** to convert text file (which was generated by Windows Hyper Terminal using PBX main console) into database, **Tariff Management** to manage call rates of all cities against landline and cellular companies, **Bill generation** to generate bill of all local phone extensions against all available company phone lines.

**Environment:** NET Framework 1.1, VB.NET, MS Access

**LECTURES & RESEARCH WORK**

- Participated in the workshop titled 'ITIL & ISO 20000-1 Implementation – Features & Benefits' at 'NUST – SEECs' on 25<sup>th</sup> February, 2011
- Delivered lectures at Margalla Institute of Technology, Islamabad during 2003-04 in the domain of Digital Image Processing, Operating Systems and the Object Oriented Programming for the BCS & MCS Programs.
- Delivered lectures at Petroman Principal Islamabad Campus (Information Technology & Telecommunications Division, Ministry of Information Technology, Government of Pakistan) during 2004 in the domain of Internet Programming.
- Member IEEE (CollabraTec).
- Appeared as an External Supervisor for a given below projects at COMSATS Institute of IT (Computer and Electrical Engineering Departments) during 2007-08:
  1. Integrated GSM based Fingerprint Authorization System (IGFAS)
  2. Fingerprint Verification System
  3. Person Identification using IRIS Scanning
  4. Object Tracking System
  5. 3D Face Modeling
  6. Face Recognition System using Eigen faces
- Review Report Request:
 

“Recent Trends in Image Compression using Vector Quantization: A Neural Network Approach”  
Image Science Journal  
Published for Royal Photographic Society by Maney Publishing
- Compiled work for the Research paper “Intrusion Attacks Detection Using OPPOSITION BASED LEARNING” (Draft),  
National University of Modern Languages, Ministry of Petroleum & NR, Entech Pvt(Ltd.)
- Compiled Research paper for the M AU Khan with the name ‘Large Block Entropy – Constrained Reflected Residual Vector Quantization’ in the domain of Signal Processing, Published in the IEEE Conference.
- Internet Governance

**EDUCATION**

<b>PhD (Computer Science)</b>	<b>(Pursuing)</b>	
<b>August 2020 Onwards</b>	International Islamic University, Islamabad	CGPA: 3.66/4.0
<b>Doctor of Philosophy (PhD) in Computer Science</b>		
<b>Research Domain:</b>	<b>Multi-Modal Biometrics and Industrial IoT, Future online Securities (Network Analysis)</b>	
Oct-2002 to Jan-2005	International Islamic University, Islamabad	CGPA: 3.5/4.0
<b>Master of Science (MS) in Computer Science (Software Engineering)</b>		
Aug-1999 to Sep-2002	International Islamic University, Islamabad	CGPA: 2.64/4.0
BS (CS)	<b>Bachelor of Computer Science (HONS)</b>	
Aug-1997 to Aug-1999	Islamabad Model College for Boys F/7-3, Islamabad	
<b>HSSC - F. Sc. (Pre-Engineering) Federal ICT.</b>		
28 <sup>th</sup> April, 1986 to June 1997	Islamabad Model College for Boys F/7-3, Islamabad	
<b>SSC - Matriculation (Science) Federal ICT.</b>		

**MS PUBLICATION**

**“Design and Analysis of Predictive Reflected Residual Vector Quantization”,**  
International Networking and Communication Conference (INCC 2004, IEEE),  
Paper No. 901, 11-13 June 2004, LUMS Lahore, Pakistan.

**EDUCATIONAL PROJECTS****Final Thesis (MS):**

The goal of research project is to develop a new efficient technique for data or image compression which is named as Predictive Reflected Residual Vector Quantization (PRRVQ).

**Environment:** gcc (C/C++), gdb, Latex, Matlab 6.5, Linux 9

**Final Thesis (BS Hons CS):**

Real Time Operating System (process management), a real time operating system's process scheduling using round robin scheduling with priorities.

**Environment:** Turbo C (low level programming) on Windows 2000

## TECHNICAL TOOLS &amp; Techniques

<b>Programming Languages:</b>	C, C#, VB.NET, Visual C++/C#, Elm, Julia, Java, Swift, R language
<b>Web Skills:</b>	ASP.NET 1.0/1.1/2.0/3.0/3.5/4.0, Classic ASP, JavaScript, AJAX, DHTML, XHTML, CSS
<b>Software/Databases:</b>	Visual Studio 2010/2008/2005/2003/.NET, Visual Studio 6.0, MS Visio, Macromedia Dreamweaver MX 8, MS Office, Install Shield 2009, Microsoft Exchange SBS/2003/2007, Microsoft SharePoint 2007/2010, Outlook Spy Tool, MAPI Editor, EWS Editor, SQL Server 2000/2005/2008, Oracle 11g Express
<b>Operating Systems:</b>	Windows NT/XP/Vista/Win7/Win10.1/Server 2003/Server 2008/2013/2016/2019/Hack, MS-DOS, Linux, SLES 10.1
<b>Web Servers:</b>	IIS 5.0, 6.0, 7.0 / WAMP 2.2
<b>Others:</b>	Web Services, SOAP, XML Spy, MAPI, Extended MAPI, CDO, CDOEX, EWS, Exchange Managed API 1.0, Windows SharePoint Services 3.0, OOD, PL/SQL Developer, Stored Procedures, Triggers, ADO.NET, Cross Browser Compatibilities and Page Load Optimizations, Web forms, Win Forms, InfoPath Forms, Crystal Reports 11, WordPress 3.5.1.
<b>Open Source Mobile</b>	<b>Android 10/11, Android SDKs</b>
<b>iPhone Mobile</b>	<b>iPhone X, MAC OSX (Apple), NetBeans, iTerm2 – Terminal [Hyper, iTerm2]</b>
<b>Research</b>	<b>Phython, Jupiter, Google Scholar, Research Gate, EverNote</b>

**IEEE Technology Trends**

- Artificial Intelligence (AI) at the edge (AI@Edge)
- Non-volatile memory (NVM) products, interfaces and applications.
- Digital twins, including cognitive twins.
- Practical delivery drones.

**REFERENCES**

**Enterprise Resources Research Solutions Private Limited (eRRS) [www3.enterpriseRAS.com](http://www3.enterpriseRAS.com)**

1. enterprise Resources And Solutions (eRAS)
2. enterprise Research And Solutions (eRAS)

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