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**Employment:** 7/97 to present **Eliasz.com / (RCG ♦ Alliance ♦ Tek Systems) - Sr. Data Architect / DBA**  
07/96 to 06/97 **Coopers & Lybrand** - Management Consultant  
03/95 to 06/96 **Ajilon Services** - Management Consultant  
11/91 to 03/95 **Aston Brooke Corp.** - Senior DBA  
05/91 to 10/91 **Computer Sciences Corp.** - Senior Computer Scientist (RCAS)  
11/90 to 04/91 **Mindbank Systems** - Consultant (CSC / RCAS project)  
04/89 to 11/90 **Cimage Corp.** - Software Architect; Prod Devl. Mgr.  
11/88 to 04/89 **Merit Systems** - Senior Consultant (Ford Motor Co)  
07/88 to 10/88 **Software Services** - Consultant (Cimage Corp)  
03/85 to 06/88 **Ford Motor Co.** (E&PDS) - Senior Analyst  
09/81 to 02/85 **General Motors** (GMISCA) - Programmer / Analyst

**Expertise:** **Data Architect / Database Administration / Data Modeling / CASE / Data Warehouse / ETL**  
Document Mgt. / Imaging / GIS  
Product Development Mgr; Software Development Mgr (3-6 employees)  
Systems Administration / Programming / System Tools Devel. / Internet/ Integration

**Applications:** Oil Systems - Process Control, Oil Mgt, Refinery Mgt  
**Data Warehousing** - AIG, Credit Card ODS & DWH(VLDB); Unisys Enterprise DWH; Many Data Marts, etc.  
Finance & Insurance - AIG, GMAC, Fusura, FirstUSA, Insurance/Credit Card industries  
PHARM. - GSK, IMS Health/DSS, FMC/Drug Discovery, BMS/Clinical Trial, Xybion/Pharma, Pathogens  
Military - Reserve Component Automation System (Large Defense Project), Navy, Aerospace POCs  
MFR - Auto Recall(**realtime**), Machine tools/parts, Parts Info & Design Tracking, Engr./Designer Checklists  
ELECTRIC UTILITY - PPL/PECO Work Mgt/CIS/GIS System;  
E-Commerce - Biomed Marketplace Portal; Truck Rental & Maintenance (JDBC/Servlets); Auto Insurance

**Servers:** UNIX - Sun Solaris, Sun O/S, SCO IBM - VM/CMS, AIX, SP  
**LINUX(Redhat 6.2/7.1/7.2),**  
DEC - Ultrix, TOPS-20, VMS MS - NT,2000,XP Mac OS X, Win95/98  
Honeywell - Multics, DTSS, Gecos DG - Aviion (DG/UX),  
Prime, Sequent, Pyramid MPP HP - HP-UX

**Databases:** **ORACLE** - RDBMS (v2.0-10g), SQL\*Plus, PL/SQL, SQL\*Loader, Discoverer 3.1, **Designer 9i**,  
SQR, SQL\*Net(1,2,NET8) Oracle9iAS, Toad/Sql Navigator, Sql Developer, JDeveloper/JDBC,  
PL/SQL Web Toolkit, Oracle Enterprise Mgr, Oracle Applications (**HR / Financials**), Data Mart Suite,  
SQL\*Forms, RPT, PRO\*C & PL/1  
**Informix** - ISQL, ESQL, 4GL **Honeywell MRDS** - Linus

**Internet:** Java/JDBC/Apache/Tomcat/Javascript/HTML/CSS/KSH/PERL/Dreamweaver/Servlets/JSP/J2EE

**Case Tools:** Designer/2000(v1-9i), ERWin/ERX (2.5-3.5; some ModelMart), Casewise (thru CM 8e),  
Business Objects Designer 6.5; Data Modeling (3NF/OLTP, Star Schema, DWH/BI, etc.)

**Education:** Oakland University, Rochester, MI - BS (Comp. Sci.) - 1981; **MS (Comp Sci) - 1987**  
1981-present - Seminars, Symposia, & Classes ; **Presenter @ Devoug & IOUG**

**References:** See my LinkedIn profile (click on the logo)



**2/2009-present SDI** – Oracle ETL, PL/SQL development & Unix System Integration ETL Performance Tuning. Working with innovative Healthcare software and data in the multi-Terabyte (>>10TB), developing ETL processes and new application software for US governmental agency to perform concommittance analysis for multi-year drug studies.

**Key Skills:** Oracle 10g, KSH, Unix, PL/SQL, SQL, packages/procedures, Toad 9.7, partitioning, ETL.

**7/2007-2/2009 AIG** – Oracle DBA, Data Warehouse DBA/Performance Tuning. Built a SOX PL/SQL (package) application for recertification of Oracle DBs and preparing audit reports.. Managed 10+ Terabyte Data Warehouse in Oracle 10.2. Investigated privacy and identity security technologies and prepared strategies for using Oracle's Database Vault and Transparent Data Encryption. Primary duties were as a production DBA with emphasis on the Warehouse platform and tuning queries and ETL processes and partitioning VL **tables** (>1TB).

**Key Skills:** Oracle 9i, 10g, KSH, Sun OS 5.8, HP/UX, PL/SQL, SQL, packages/procedures/db triggers, Toad 8.5, partitioning, ETL, SOX.

**11/2006-7/2007 Glaxo Smith-Kline & short stint in Phila. Mayor's Office for Data Warehouse** –

Oracle DBA, Data Warehouse Developer. Built Bus. Objects Universes for Oracle Data Marts (Designer 6.5). GSK, required my analytical skills, data modeling, DBA, and programming skills(KSH/Perl, SQL, PL/) to help them with maintaining their various Data Warehouses (Financial, Time/Projects, etc.). I also developed some LOBs code for the database. I maintained an automated db refresh in Unix shell scripts, using exp/imp, & some dynamic sql. I wrote dynamic sql on two other ETL processes (to rebuild indexes, including partitioned/subpartitioned indexes and dealt with the constraints) and DBA duties on 2 Data Warehouses. Wrote SOX application for managing employees and their LAN access ids for SOX certification. Lastly worked on City of Philadelphia Data Warehouse ETL load using PL/SQL in 10g and meta data driven load process.

**Key Skills:** Oracle 9i, 10g, Business Objects Designer 6.5, KSH, Perl 5.x, Sun OS 5.8, PL/SQL, SQL, stored procedures /db triggers, Sql\*Developer, Sql\*Navigator 5.5, partitioning, blobs/clobs, automated refreshes. SOX

**01/2006-12/2006 Primavera** –Data Architect / ETL. I designed the ETL process which supported both Sql\*Server and Oracle. This was a generic Data Mart / ODS reporting tool (based upon project mgt data) that could be deployed with the application to do standard reporting and OLAP rollup/drilldown analysis of the data. The ETL process was designed to be metadata driven with code generated dynamically from the metadata at release time and also for each ETL run. The star schema model had to work for all customers with no a priori knowledge of the underlying data, just the domain (project mgt). I did the Oracle ETL development, using CDC, PL/SQL, and Perl. I also wrote a Java stored procedure to allow shelling out to the operating system.

**Key Skills:** Oracle 9.2/10g, CDC, ETL, Perl 5.8.6, Data Modeling, PL/SQL, SQL, stored procedures / functions / db triggers, shell scripts, Sql Developer, Java.

**08/2005-12/2005 GMAC** – Oracle DBA, Data Modeler, and ETL Developer. GMAC used my data modeling working with an industry standard model(MISMO) and made enhancements to support GMAC's many products and companies. Besides data modeling using Er/Win , I was also tasked with developing the ETL process for loading their historical data into the Data Warehouse. I used Er/Win to model Enterprise Data Warehouse for Mortgage/Lending. Established naming standards, domains(std data types), PL/SQL programs to perform ETL. Tuning & Integration Tests.

**Key Skills:** Oracle 9.2, Er/Win 4.1, Data Modeling, ETL, Data Warehouse (Mortgage/Loan Products), PL/SQL, SQL, stored procedures /functions / packages/ db triggers, Toad.

**04/2005-8/2005 McNeil** – Oracle DBA, Data Architect. McNeil used my data modeling on new design projects and to perform application DBA work on both Validated and non-Validated systems, including their Sales Roster and Pharmaceutical Dashboard. Also worked as a Business Analyst on an SAP BW project (reporting area using BEx). Developed and Trained the Trainers on BW Reporting using BEx.

**Key Skills:** Oracle 9.2, KSH, Er/Win 4.1, Data Modeling, Sun OS5.8, PL/SQL, SQL, stored procedures /functions / packages/ db triggers, Unix shells, Toad. SAP Logon Pad, SAP R/3, BW, BEx Analyzer.

**01/2005-04/2005 Primavera** – Oracle DBA, Data Warehouse Developer. Primavera, required strong data architectural, data warehouse, data modeling, DBA, & programming skills(KSH, SQL, PL/SQL) to design a DWH & develop ETL for their DataWarehouse. Used Change Data Capture (Log Miner) to capture OLTP changes by reading from redo logs (not the tables). Implemented the CDC processing & ETL in staging tables & then replicated the data to a schema for near-real-time reporting & analysis on 30 minute intervals. Did data modeling, architecture, ETL programming, system integration, & DBA duties. Used Scrum/Agile Methodology on the project (an eXtreme Programming Methodology).

**Key Skills:** Oracle 9.2, KSH, Er/Win 3.5.2, Data Modeling, Sun OS5.8, PL/SQL, SQL, stored procedures / packages/ db

triggers, Unix shells, Sql\*Navigator 4.5/Toad, materialized view (replication); Agile Methodology.

**05/2004-12/2004 Glaxo Smith-Kline(GSK)** – Oracle DBA, Data Warehouse Developer. GSK, required my strong analytical skills, data modeling, DBA, & programming skills(KSH/Perl, SQL, PL/SQL & Java) to help them maintain Data Warehouses(Financial, Time/Projects, etc.). I moved them from basic tables to partitioned tables. I also developed load/unload BLOBS in/out of the database. I developed a completely automated db refresh in Unix shell scripts, using exp/imp, and some dynamic sql. I also used dynamic sql on two other ETL processes (to rebuild indexes, including partitioned/subpartitioned indexes with the constraints) & 2nd refresh process using PL/SQL. DBA on 2 DataWarehouses.

**Key Skills:** Oracle 8i, 9i, KSH, Perl 5.x, Sun OS 5.8, PL/SQL, SQL, stored procedures /db triggers, Unix shells, Sql\*Navigator 4.5, Java (1.4.x), JDBC(2.0), partitioning, blobs/clobs, automated refreshes.

**09/2003-04/2004 Bristol-Myers Squibb** – Oracle DBA/Internet Developer. Two diverse projects, requiring, DBA, PL/SQL, SQL, HTML, Java, Javascript, Web Apps/Servlets, JSP, Web/Application servers, UNIX shells, & Pharmaceutical experience. I did a Public Disclosure system that controlled public disclosures of sensitive trade information/products/compounds in journals, conferences, presentations or public postings without compromising intellectual property. The Web Appl. was built with Oracle RDBMS and 9iAS, PL/SQL Web Toolkit, HTML, Javascript & stored procedures to develop/present a data driven web application that generated dynamic web content. Developed code using PL/SQL, HTML, CSS, Javascript, SQL, stored procedures & deployed to Oracle Application Server. A Second project was enhancing/deploying IE 6.x to replacing Netscape 4.8. I handled DHTML, & cross browser issues between Netscape & IE. It involved servlets / JSP written in Java, with HTML, Javascript, Unix shells for a web application(J2EE) & deploying to Oracle9iAS, with Oracle 9i db.

**Key Skills:** SQL Navigator, ClearCase, Remedy, , Oracle 8i/9i, Oracle9iAS, servlets, JSP, JDBC, Dreamweaver, HTML, CSS, Java, Javascript, PL/SQL, SQL, stored procedures/packages/db triggers, Unix shells.

**3/2003-8/2003 Xybion** - I used Oracle Designer 9i & reviewed a data model, made physical model recommendations for a Pharmaceutical/Clinical/Lab Management system database. Tweaked physical model.

**Key Skills:** Oracle Designer 9i, Data Modeling, Pharmaceutical Clinical Lab Mgt, Oracle 9i.

**8/2002-2/2003 Independence Blue Cross** – Was the project's Technical Architect. Did Business Process Modeling, systems analysis, Engineering diagrams, and collected the data and diagrams to produce meta data and drawings for an Enterprise-wide Application Architecture, which we published to the corporate Intranet(IWAY). I led a team of developers, established development procedures/standards, business process modeling, Visio drawings and used Dreamweaver MX to do the initial prototype of the website to hold the Application Architecture.

**Key Skills:** Intranet, Dreamweaver MX, Visio, GIF's, Casewise Corporate Modeler 8e, HTML. MS Office, BPR

**4/2002-8/2002 FUSURA/AIG** – Was the company's Data Architect/DBA. Did the data architecture & production database administration. Used Oracle 8i, LINUX & Sun Solaris, AG Dynamo, Apache, Tomcat, to build & maintain the web interface for E-Commerce insurance web site. I managed, tuned, designed, deployed: development, QA, Production and Data Warehouse databases. I also designed and developed feeds to partner on the Internet.

**Key Skills:** Oracle 8i, Oracle Enter. Mgr, E-Commerce, JDBC, MTS, LINUX/Solaris, Data Warehouse, Materialized Views.

**12/2001 – 3/2002 – Aetna US Healthcare & IKON/Campbell Soup review/tuning** - At Aetna, I had to reverse engineer PL/SQL ETL application. I also diagnosed and fixed ETL problems with Aetna US Healthcare's NYLCare Data Warehouse. I also did tuning and surveyed various databases using Oracle Parallel Server on an IBM SP (IKON, Campbell Soup).

**Key Skills:** Oracle 8i/9i, Oracle Parallel Server v8, PL/SQL, Sql\*Loader, IBM SP. ETL Data Warehouse, TOAD.

**3/2001-11/2001 GE Capital** – I was Data Architect, data modeled & designed system architecture. Used Oracle 8i, Apache/JServ, with HTML forms & JDBC servlets to build an e-commerce site. I established the SQL, JDBC standards & tuned SQL & database. I used Oracle Designer, created database objects & deploy to the database. Used Oracle's multithreaded server(MTS) to scale the number of users to support 300 concurrent internet transactions. Did the Data Warehouse tuning. Taught BI/Star modeling & how to take a design to a physical model. E-commerce site used partitions in ETL to load data from a client/server application (that we replaced with the web application).

**Key Skills:** Oracle8i, Oracle Enterprise Mgr, Oracle Designer 6.1, Data Modeling, E-Commerce, JDBC, Sun Solaris.

**1/2001-3/2001 Medispare** – Medispare, a medical/biomedical Internet Portal for hospitals/biomedical companies to procure through the portal from OEM's, Mfr's, Parts & Services vendors & a community for the medical/biomedical

professionals. The web site included auctions, catalog/shopping cart & other Internet components using J2EE architecture. The various Internet COTS components were integrated to meet the needs of Medisparcs & minimizing the custom code. I was the Data Architect responsible Catalog Data Acquisition & Loading, designing the Data / Technical Architecture to meet the functional requirements/specifications we gathered.

**Key Skills:** Oracle8i, Oracle Enterprise Mgr, Er/Winv3.5, Data Modeling, Rightworks, Catalog/Shopping cart, OnDisplay, Internet Portal.

**2/2000-8/2000 Naviant** - Naviant was an internet company that did precision marketing & online registrations. I did data modeling (logical & physical modeling on VLDB's). I taught them how to use advanced Oracle8i features. I used Er/Win 3.5 & Model Mart, Sql\*Navigator, EZ/SQL tools to perform reverse engineering to start the logical modeling from the existing data model. I then finished a logical model, took it physical (adding scalable options such as partitions, bitmaps, etc.). The databases were an OLTP & an Operational Data Store(ODS). I also worked on the ETL process. Finally, I performed DBA duties such as: tuning, capacity planning, rebuilding objects to scale, de-fragmenting & other db tuning, correcting Net8 configurations, etc. for all the Oracle db's. I did a survey of Oracle's XML capabilities. I also installed Oracle's JVM (JServer) & wrote some Java Stored procedures for the web developers.

**Key Skills:** Oracle v8.i; Oracle Enterprise Mgr, Er/Win v3.5, Data Modeling, Operational Data Store, VLDB(>1TB), PL/SQL, Sql\*Loader, Java, JDBC, Java Stored Procedures, Sql\*Navigator, Sun O/S 5.7.

**12/1999-2/2000 4Anything.com** - 4anything.com needed a data mart to analyze web traffic data. Did the data modeling & architecture design & construction of the logical models, physical models, & physical database. Also built the Traffic Data Mart. Tuning/diagnosis. Installed & setup **Oracle's Data Mart Suite**.

**Key Skills:** Oracle 8i, Data Mart Suite, Data Modeling, Data Marts, VLDB, PL/SQL, Sql\*Loader. Web DB, Sun O/S.

**8/1998-8/1999 UNISYS** - Did the data modeling & data architecture work in design/construction of the logical models, physical modeling, & physical database. In addition, to building the initial **Data Mart** (Sales) & integrating the Query Tools(Business Objects & Oracle Discoverer), I also tuned & diagnosed bottlenecks (usually network /ISS related, sometimes Oracle bugs). Launched other Data Marts & coalesced their feeds & standardized data elements. Most Data Marts were fed from Oracle Applications such as Oracle PA, Oracle Financials, & Peoplesoft. We used ISS as the Web server. Took advantage of many Oracle 8 features including table/index partitioning, bitmap indexes, STAR TRANSFORMATION, etc. to tune & enable complex OLAP queries. Finally, I tuned online Oracle for NT databases & diagnosed problems with Web front-ends into UNIX & NT Oracle databases. I configured **Oracle's DW Builder for Oracle PA, Peoplesoft, & Oracle Financials**.

**Key Skills:** Oracle v8, Oracle Parallel Query, Oracle Enterprise (UNIX), Oracle for NT, Data Modeling, Data Marts, VLDB, PL/SQL, Sql\*Loader, Oracle Enterprise Mgr, Oracle Designer/2000 v2.3, OADW, & international data privacy laws.

**2/1998-8/1998 COPELCO** - Developed the Data Conversion Methodology, managed the conversion team, data modeling, & the preliminary development of the data conversion framework. The project involved Analysis of a Lease Administration system with interfaces to Oracle Financials. We ETL'ed data from an old OLTP system & from ORACLE Financials & ORACLE HR databases to populate the Operational Data Store. The database was ~150GB utilizing Oracle's Web Application server for the front-end.

**Key Skills:** Oracle v7.3; Oracle Parallel Query, HP/UX, Data Modeling, Operational Data Store, VLDB, PL/SQL, Sql\*Loader, Designer/2000 v1.3, **Oracle HR, Oracle Financials**.

**8/1997-1/1998 PECO Energy** - Developed PECO's Data Warehouse & Data Mart strategies & wrote white papers. Demonstrated the proof-of-concept of the White Papers by building a Data Warehouse lab demonstrating the various tiers & how the infrastructure worked. Once the proof of concept was built, I mentored the Data Architects to design Data Marts utilizing the Data Warehouse Workbench & Methodology. I also tuned a Data Mart (~75GB).

**Key Skills:** Oracle v7.3; Oracle Parallel, IBM AIX, Oracle for NT, Data Modeling, **Data Warehouse**, VLDB, Data Marts, Developed Warehouse Methodology, Data Pivoting, Oracle Name Server v2.0.

**6/1997-7/1997 Clark Shoes** - Developed a Sales Data Mart. Wrote stored procedures to load the fact table using data pivoting techniques.

**Key Skills:** Oracle v7.3; Oracle for NT, PL/SQL, **Data Mart**, Data Pivoting, ETL.

**7/1996-6/1997 Coopers & Lybrand for FirstUSA** - I was a Data Warehouse Architect using the latest hardware & software available to build a VLDB (1.0+ Terabytes of raw data!), Data Warehouse on an Massively Parallel

(MPP) Unix platform for FirstUSA. Performed the Logical & Physical modeling, built the initial database, & developed some of the ETL processes. Did DBA tasks from development thru deployment. Led the data modeling (which included Joyce Bischoff).

**Key Skills:** Oracle v7.2/7.3; Oracle Parallel Server, Pyramid MPP/Reliant-Unix, Data Modeling, **Data Warehouse**, VLDB (3.5TB), ERwin/ERX 2.5, SUMMIT-D Methodology.

**3/1995-6/1996 Ajilon with CSC Partners** - A Data Architect role using CATALYST methodology to re-engineer the business processes of **PPL**. The database was a VLDB, with distributed technologies. My responsibilities were data modeling (Conceptual, Logical & Physical), data architecture. I did DBA & CASE repository management (Designer/2000). Worked on the Work Mgt. & GIS on the project. The work Analysis and Systems Design, thru Construction. The project was developed using off-the-shelf packages which we evaluated, went through package system design & gap analysis. Integrated the packages, migrated legacy data, & deployed the new system.

**Key Skills:** Oracle v7.1/7.2; Oracle Parallel Server, CASE (Designer/2000; Casewise), SQL\*Net v2/ NetManager/Oracle Names, HP/UX; Catalyst Methodology (for BPR), Client/Server, ODBC.

**11/91-3/95 Aston Brooke Corp(now Full Tilt)** - I worked on 3 Oil systems & an Employee Scheduling system for **Mobil Oil**. The Oil systems from process control, to oil movement & mgt, to refinery simulation and modeling. The employee scheduling employees across 3 shifts, with complex union rules for scheduling & overtime payment. I developed a Drug Discovery DB for **FMC**. At TPF&C, I was the DBA for 45-50 UNIX(v6) plus some DOS(v5) dbs & also Unix Administrator for 12 UNIX servers. I did Systems Integration to blend the technologies. I was a v6 -7 DBA for **Bristol-Myers Squibb** where I installed DB\*Vision. I was the primary DBA(v6 & v7) at Ford Electronics plant for 20 db's realtime (5 24x7). I used Eco Tools to monitor the db's. Lastly, I was a DBA for VLDB's used in **DSS at IMS America**. I evaluated/tuned Oracle dbs. I wrote the DBA scripts, shell scripts to make it "shrink wrapped" & did installs of DB\*Vision.

**Key Skills:** Oracle v5,v6,v7, SQL\*Forms v3.0, SQL\*Loader, Pro\*C and realtime Vax C programming, SQR, PL/SQL, C / Kshell / Tcl/Tk /Perl/DCL scripts, & Lotus 1-2-3 add-in, VMS, SCO Unix, AIX, HP-UX & Oracle for NLM. DBA, Unix Admin.

**05/91 to 10/91 Computer Sciences Corp.** - Reserve Component Automation System (RCAS). RCAS was a massively distributed system to mobilize troops & manage unit administration. I worked on the 1st phase & on the Post-Phase 1. I did data modeling, application tuning, database application development (3GL & 4GL), data prep & loading.

**Key Skills:** Oracle v6 (Oracle v7 alpha, Trusted Oracle alpha), SQL\*Forms v3, Pro\*C, SQL\*Loader, SQL\*Plus, PL/SQL, DoD, Mil-Std-7935A, Modeling (ER-Diagrams, DFD's) Unix, C-shell scripts.

**11/90 to 04/91 Mindbank Systems** - RCAS. I started out as a consultant to CSC. My work on the Competitive Demo was so highly regarded, that they hired me even though they had not yet won the award.

**Key Skills:** Same as Computer Sciences above.

**04/89 to 11/90 Cimage Corp(Ann Arbor, MI)** - I was the Application Architect for Data Master®. I developed software to manage images (CAD drawings, GIS, maps, etc.). Data Master was used to create custom data elements for the images & manage external files that held the images. I designed the client/server protocol, & implemented the database server on ORACLE. Data Master was RDBMS independent (implemented using SQL standard), & was ported to Unix & Dos. We could use one RDBMS on one O/S while the server could be another RDBMS on another O/S. Prior to my arrival the product was only on DOS using Informix (with non-standard SQL) & we had to custom build the db for each customer. I was promoted to Database & Applications Mgr.

**Key Skills:** Oracle v5 & v6, Pro\*C, SQL\*Forms v2.3. Informix, 4GL & ESQL/C. Systems Analysis/Integration, Client/Server. UNIX : Sun, Dec 5100, IBM RS/6000. Dos Servers, RFP's/RFQ's. Imaging.

**Merit Systems(Dearborn, MI)** - Design For Quality (DFQ) was a system to take engineering & designer templates & instantiate the templates to particular vehicle programs. These checklists were a mechanism to capture expertise of the best engineers/designers. We prototyped DFQ on DOS, finalized DFQ on DEC Vax (Ultrix) & ported the application to PRIME & Sequent computers.

**Key Skills:** Oracle v5, Pro\*C, SQL\*Forms v2.3. Dec, Prime, Sequent Dynix, & DOS.

**Software Services(Ann Arbor, MI)** - I was a consultant to Cimage Corp. I visited customer sites performed systems analysis & preliminary design work. I developed many Image Mgt/GIS prototypes for our customers: GM, US Army, US Navy, PG&E, Martin Marietta, etc.

**Key Skills** - Systems Analysis and Integration, Data Modeling/ER Diagramming, and Data Flow Diagrams. Some

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**Employment Details:**

proposal work as well. I also worked with Imaging tools. Oracle v5/v6. Client/Server. Some C programming.

**Ford Motor Company(Dearborn,MI)** - I was a Systems Analyst on the CEPR project. I did extensive Oracle forms. Manufacturing/Bill of Materials, Project Timing(I developed a project mgt system using Oracle, PL/SQL, REXX)

**Key Skills:** Oracle **v2- v5**, using SQL\*Plus, SQL\*Forms 1.0, 2.0, & 2.3, SQL\*Loader & PRO\*PL/1. I also did PL/1 & REXX development external to database developments. IBM/Amdahl VM/CMS, Honeywell Multics & Fortune Unix .

**General Motors(Warren/Detroit, MI)** - I was a Programmer/Analyst. I was also a systems programmer & did some system admin. I worked on numerous projects employing an enormous variety of technologies. I was trained in Relational Data Modeling(1981) I was taught relational modeling which I used on small and large projects.

**Key Skills:** PL/1, MRDS RDBMS, Data Modeling, Perephonics (realtime telephony), Tellagraf /Displa, Honeywell Multics. BASIC on Honeywell DTSS, Cobol, Fortran & DPL on DEC Tops 20. Realtime programming.