## PROFESSIONAL EXPERIENCE

HUMAN INTERFACE PROTOTYPES June 2001 – present

 (except when in full-time position)

**Project Manager / Programmer**

*A technical services company, as president and sole proprietor, engaged in the following projects, and wrote Python, C/C++ and Java code in support of each deliverable, also managed up to two other programmers on projects where needed. Clients have included:*

* **Mindtel, LLC**

Programmed 3D visualization of geo-spatial-temporal data in C and Java using innovative “glyph” techniques, and 3D visualizations in C++/OpenGL for the ZSpace 3D stereo display system from Infinite Z.

* **SynGlyphX Corp.**

Provided software engineering consulting, both software architecture and development, in C, Python and R, for 3D visualizations of complex geospatial, demographic, and historical data from business records, social media, surveillance systems, and other diverse sources.

* **FTL Games**

Provided management consulting for the “Sundog” game project, on software architecture, 3D toolkits, “world building” workflow, content, and programmer hiring decisions.

* **Defense Advanced Research Projects Agency (DARPA)**

Produced visualizations of the on-line multi-player game *America's Army* showing player interaction and team trends mined from gigabytes of server log files.

* **National Reconnaissance Office (NRO)**

Produced visualizations for research into the display of bio-terrorism threats and other geographically-based public health information, as well as the display of large-dataset cultural intelligence data.

* **BIOwulf Technologies**

Produced a video explaining Support Vector Machines (SVM) machine learning algorithms.

SQLSTREAM February – September 2017

**Presales Solutions Consultant**

* Employer is a producer of high-performance stream processing software, for issuing SQL queries on big data streams in real time (latency in milliseconds).
* Provide technical services for sales and marketing, including:
	+ managing prospect evaluations of software
	+ developing demos and proof-of-concept applications using prospect’s data
	+ preparing and delivering sales and marketing presentations
* Perform engineering tasks, including:
	+ developing applications for customer deployment, on local servers and cloud
	+ performing Quality Assurance (QA) testing on software releases
	+ integrating SQLstream software with machine learning library Apache Spark SystemML, using Support Vector Machine (SVM) model

CAST and CREW ENTERTAINMENT LLCMarch 2008 – October 2009

**Software Developer**

* Employer is a provider of payroll services for the entertainment industry.
* Wrote and debugged C code for deployment in production accounting environment.
* Performed unit and system tests.
* Wrote software documentation.

RESMED CORP. March 2005 – January 2008

**Field Sales Engineer**

* Employer is a producer of medical equipment and medical business software, sold by telephone, installed, trained customers, supported and customized software for medical inventory management and patient tracking.
* Applications written in Visual Basic for Applications (VBA) in the Microsoft Access environment.
* Modified and customized VBA code, wrote SQL queries and performed data conversion and import from a variety of medical billing packages.
* Managed the beta test of a new software package.

ORDERFUSION, INC./DOVER PACIFIC COMPUTING, INC. July 1998 - March 2001

**Sales Support Engineer**

* Employer was a producer of business-to-business (B2B) e-commerce software.
* Answered questions and wrote demos, responded to RFPs, gave presentations and demonstrations to prospects, and trained all new field sales engineers (SEs).
* Created and updated corporate product demos, configured and maintaining all corporate office and trade show demo computers. Wrote customized demo programs, gave product presentations and demonstrations, and provided other pre-sales technical support.

### TECHNICAL SKILLS

Enterprise software, including machine learning, data visualization, “big data,” social media analysis and display, graphical user-interface (GUI) based, client-server, multi-tiered and Web-based applications, for data analytics, Internet of Things (IoT), e-commerce, guided selling, customer relationship management (CRM), inventory.

### LANGUAGES/OPERATING SYSTEMS

C/C++, Java (applets, applications, servlets, JSP), SQL, Python, R, HTML/CSS, VBA, JavaScript, many assembly languages, UNIX (all Linux, System V, BSD and OSF variants), Windows and Macintosh.

### DEVELOPMENT TOOLS and ENVIRONMENTS

Amazon AWS, Oracle Virtual Box, Apache Spark SystemML, JBuilder, J2EE, JDBC, ODBC, Visual Studio, SQL Server, XML, SAX, JAXP, OpenGL, Microsoft Access.

## PUBLICATIONS/PROFESSIONAL ORGANIZATIONS

* Author of “A Survival Guide for the Traveling Techie” launched on Amazon.com November 15, 2014.
* **North American Association for Social and Organizational Science (NAACSOS) June 2004:** paper: *Experiments in Visualizing Social Networks*.
* **ACM SIGGRAPH 1994**: technical sketch: *Architecting AVS Express* (with J. Vroom)
* **July 2003** Chair of SIGKIDS San Diego 2003.
* **August 1998 to 2010:** Member of Executive Committee the San Diego Professional Chapter of ACM SIGGRAPH (the Association for Computing Machinery's Special Interest Group on Graphics).

## EDUCATION

[University of California at Santa Cruz](http://www.ucsc.edu" \t "WinOther) – Information Sciences

Attended for 4 years