

Robert T. Gruen
cell: 513.376.1945
Email: bob.gruen@gmail.com
LinkedIn: <https://www.linkedin.com/in/bobgruen/>

Analytical Software Engineer with experience in data analysis and communication, seeking to leverage technical expertise to bridge the gap between business needs and technical solutions.

Professional Experience

- 06/22 – 01/24 **Cold Jet** **Web Application Development Manager**
- Designed and developed Cold Jet's IoT platform, "Cold Jet CONNECT Analytics". Completely developed on my own time and saves Cold Jet hundreds of thousands of dollars in licensing fees annually! It is more modern looking, responsive and performed significantly better than our previous solution, which was built using PTC's Thingworx.
 - Responsible for all design, development, testing and project management
 - Responsible for the database architecture (storing over 75 million records from over 3,000 machines in the field and handling several thousand queries per second)
 - Hosted and performed training sessions for sales and service staff around the globe
 - Managed and mentored development staff
- 08/15 – 06/22 **Cold Jet** **Web Application Architect**
- Conceptualized, designed and developed dozens of interactive, fully responsive, web based reports. from CSV and JSON based data feeds from our CRM. Some key reports include:
 - 30 Day Sales Prediction
 - Campaign ROI Dashboard
 - Regional Sales Manager (RSM) Sales Dashboards
 - Lead Dashboard
 - Key Performance Indicators KPI Dashboard
 - Opportunity Pipeline Dashboard
 - Lead and opportunity conversion rate reports
 - Reports were built using HTML, PHP, MySQL, CSS, JavaScript, jQuery, Highcharts and ChartDirector
 - Was responsible for all PHP and database development and for Linux web server management and management of Apache on Cold Jet's LAMP web servers
 - Created an Android application (using Java) for Service Technicians performing preventative maintenance inspections on Cold Jet machines. They would directly input information into their tablet, which would then send the data to mycoldjet.com for review/analysis.
- 01/08 – 08/15 **Cold Jet** **Senior Web Application Developer**
- Extended CRM (Saleslogix) functionality; added functionality to search across accounts, leads, and opportunities. Created filters such as search by distance, etc.
 - Implemented new web sites for Cold Jet such as dryiceproduction.com, dryicecleaning.com, mycoldjet.com and more
 - Proactively looked for bugs and code efficiency gains
 - Evaluated business problems, enhancement requests, and bugs to come up with new and innovative solutions
 - Performed all custom development on Cold Jet's corporate web site, coldjet.com
 - Created the Cold Jet web portal/intranet, mycoldjet.com, a secure web site for clients and employees to access business information, and for sales reps to share information with

customers and prospective customers. Created several web applications on mycoldjet.com including:

- Remote Monitors – secure real-time reporting on the production of dry ice by Cold Jet pelletizers and reformers. Accessible to Cold Jet service reps as well as allowing customers to monitor their dry ice production from anywhere in the world. These were Cold Jet's first IoT enabled devices.
- Knowledgebase of all things related to dry ice cleaning and dry ice production.
- Product Configurator – a tool that allows sales reps to configure Aero dry ice blasting machines and share the information with prospective customers.
- ROI Calculator – provides prospective customers with their expected ROI if they purchased and used Cold Jet dry ice blasting equipment for their specific cleaning applications.
- Cold Jet Sales dashboard - over a dozen different charts with supporting data. Some of the key reports include: MTD sales by Sales Manager or by group, value of current opportunity pipeline, predictive sales report, sales by industry by quarter and more

09/05 – 01/08 **Convergys** **Specialist, Web Developer**

- Responsible for all PHP and database development on Convergys' corporate web site, convergys.com
- Architected the hardware and software solution for Convergys' web environment
- Managed several junior developers and consultants on web projects
- Developed the Convergys Global Training Infrastructure. This system is used by 100+ trainers, for 10,000+ annual training deliveries. It provided course scheduling, online registration, course evaluations, reporting and more.
- Designed and developed a PHP Project Dashboard that captures key project information and produces charts reporting on key project metrics such as CPI (Cost Performance Index), SPI (Schedule Performance Index) and more
- Developed custom reports including Executive Scorecards, Employee Utilization, etc.

03/03 – 09/05 **Convergys** **Senior Associate, Web Developer**

- Member of Convergys' PHP Security Standards Committee
- Performed most PHP development on Convergys' corporate web site, convergys.com
- Developed a very successful PHP application for enterprise resource management
- Developed Convergys Alert, a PHP application that allows senior executives to track critical product issues and better understand how we are meeting Service Level Agreements with clients.
- Developed a PHP application to securely serve Convergys training documents to those who request them and who are approved
- Integrated Google Search Appliance to handle search

08/02 – 03/03 **Computer Horizons** **Consultant, Web Developer**

- Employed as a consultant for Convergys Corporation
- Developed web sites using HTML, PHP, MySQL and Oracle for Convergys clients such as Sprint, Verizon and OnStar
- Developed marketing micro-sites using HTML, PHP, MySQL and Flash
- Integrated Inktomi Enterprise Search on the Convergys Product Documentation web site
- Developed custom code to track visitor usage (page loads, downloads, security events, etc.) for the Product Documentation web site. I also created pages to display reports and graphs based on this information.

03/01 – 05/02 **PlusSize.com** **Lead Web Developer / CIO**

- Interviewed, hired and oversaw the technical staff and consultants
- Directed and/or performed all design and development efforts at PlusSize.com

- Worked directly with key partners to integrate their products and promotions
- Managed the PC office network, Linux servers, Apache web servers and MySQL databases
- Designed and created the product and member databases
- Developed interactive web pages using Perl/CGI, HTML, MySQL, Photoshop and Flash
- Implemented Perl code to parse XML files containing product data from our vendors. The code would identify the products wanted on the web site, extract the data and store it in the database.
- Designed, developed, delivered and tracked, HTML emails for key partners such as: Jockey, Elisabeth, Procter & Gamble and many others
- Grew the registered user base from 10,000 users to more than 100,000 users. Grew traffic from 500 unique visitors per day, to over 7,000 unique visitors per day

- 11/97 - 12/00 **Structural Dynamics Research Corporation (SDRC)** **Software Developer**
- *I-DEAS 9 Primary Project:* Served as Technical Lead on the team formed to implement an XML authoring environment at SDRC. I developed project plans, UI prototypes and using C++, I implemented a Windows based toolkit to support the technical writers with various tasks involved in authoring online documentation.
 - *I-DEAS 8 Primary Project:* Enhanced the Java based search engine in SDRC's, I-DEAS
 - *I-DEAS 6 & 7 Primary Project:* Developed the process, the C++ applications and the UNIX shell scripts that converted SDRC's online documentation from Interleaf source documents into a fully linked, HTML-based, Online Help system. The conversion process preserved all text, fonts, graphics, tables, hypertext links, etc. A Table of Contents I designed were also produced (a Java applet).
 - Created a C++ application to connect our new HTML documentation to SDRC's *I-DEAS* product. I originally developed the application on IRIX but later ported it to HP, Sun, Rios and Windows NT.
 - Consulted for all System Administration issues affecting Publications and Production computers. These systems comprised a network of more than 35 Sun/Solaris workstations, a Sun Enterprise 3000 file server, 5 SGI workstations, and 15 Windows NT systems.
- 02/97 - 11/97 **Structural Dynamics Research Corporation** **Production Tools Developer**
- Tools programming (UNIX/C, UNIX Shell Scripts, Java, JavaScript, HTML)
 - *I-DEAS 5 Primary Project:* Rewrote the C programs and UNIX Shell Scripts used to process SDRC's Smart View documentation. My rewrite reduced the processing time for our documentation from 3 days down to about 12 hours.
 - Responsible for the design, development and implementation of the tools used to localize UI files for the Metaphase PDM software. By creating text dictionaries that would be updated, sorted and saved for the next release, my tools helped minimize the department's localization costs.
- 10/94 - 02/97 **Structural Dynamics Research Corporation** **Production Specialist**
- Managed the disk space and work environment for the Publications department
 - Refined and automated production processes with UNIX Shell Scripts and C programs
 - Built and debugged the databases used by SDRC's *I-DEAS Smart View* product
 - Provided technical support to SDRC's Publication and Localization departments
 - Supported and maintained SDRC's Interleaf installation for the Publications group
- 12/92 - 10/94 **Structural Dynamics Research Corporation** **Lead Computer Operator**
- Supported the UNIX, VAX and PC Help Desk
 - Created UNIX Shell Scripts to support and automate MIS procedures and activities
 - Scheduled and executed complete backups for all corporate file servers
- 10/90 - 10/92 **The Procter & Gamble Company** **Computer Operator**

Technical Experience (professional experience indicated)

Programming & Markup Languages

- **Development & Databases**
HTML (20+ years), PHP (15 years), MySQL (20 years), CSS (10 years), Python (1 year), Oracle (3 years), Java (5 years), Android (2 years), JavaScript (15 years), Perl/CGI (2 years), XML (1 year), AJAX (5 years), Apache (10 years), Responsive design/Flex (5 years), UI design (16 years)
- **Windows**
Visual C++ (2 years)
- **UNIX**
UNIX/C++ (2 years), UNIX/C (4 years), UNIX Shell Scripts (5 years)

Application Software & Frameworks

- Highcharts, ChartDirector, Adobe Photoshop, Adobe Dreamweaver, 3D Studio MAX, Blender 3D, MS Office (Word, Excel, PowerPoint), Thingworx, Chrome, Edge, Firefox, PageMaker, Interleaf, vi and many more

Development Environments & Debuggers

- VS Code (4 years), Android Studio (1 year), Eclipse (4 years), Dreamweaver (10+ years), MS Developer Studio (2 years)

Artificial Intelligence

- Implemented stable diffusion from scratch using Python and PyTorch. You enter a text prompt and generate images up to 768x768.
- Created Python code that trained an AI agent to play the following OpenAI gym games: CartPole, Breakout, Freeway, and Ms Pac-Man. Used python, stable-baselines3, and the OpenAI gyms to create different models. Learning to tweak hyperparameters to get the best possible outcome. Beginning to learn to use TensorBoard to better understand the learning process and how changes affect the learning process. Technologies used include: Python, Stable Baselines 3, TensorFlow, TensorBoard, and the OpenAI Gym.
- Created a web page that opens a stream from your local webcam. Used TensorFlow JS to create a neural network, perform Object Detection and label items (such as 'person - 98%', or 'phone - 87%', etc.) in the live video stream. Technologies used include: TensorFlow, JavaScript and HTML.
- Created a 2D driving simulation that learns to drive using genetic algorithms. Hundreds of cars spawn, after some time, the best car's "DNA" (or weights) is saved, mutations are performed and a new generation of cars spawn using the saved "DNA". After a few generations, the cars start to drive very well and do things like avoiding other cars. (HTML, JavaScript)
- Created a web-based Asteroids game and a configurable neural network from scratch using JavaScript. It is capable of training and then playing the game at a super-human level. (HTML, JavaScript)

Professional Achievement Awards

August 2021 – Won a quarterly award for the Cold Jet value of Personal Effectiveness. Awarded for my work to support the commercial launch of Cold Jet's IoT platform, CONNECT Analytics.

April 2021 – Won a quarterly award for the Cold Jet value of Innovation. Awarded for my work to develop the "Fleet Management" module in Cold Jet's IoT platform, CONNECT Analytics.

October 2020 – Won a quarterly award for the Cold Jet value of Innovation. Awarded for significant product enhancements to Cold Jet's CONNECT Analytics IoT platform.

November 2019 – Won a quarterly award for the Cold Jet value of Innovation. Awarded for designing and developing Cold Jet's IoT platform, Cold Jet CONNECT. Was completely designed and developed during evening and weekend hours.

August 2016 – Won a quarterly award for the Cold Jet value of Innovation. Awarded for designing and developing a new report, the Pipeline Dashboard. This report provided important insights into our sales pipeline that management previously did not have.

March 2015 – Won the Cold Jet award for Customer for my never-ending desire to better serve my customers through web automation.

March 2014 – Won the Cold Jet award for Innovation for my improvements to the company's Engineering Change Request system.

August 2005 – Part of the Convergys Web Team that received the Web Marketing Association's 2005 Web Award for Outstanding Achievement in Website Development.

August 2004 – Received the Spotighting Employee Excellence award from Convergys for my role in developing a web-based resource management application that was used globally within Convergys.

March 1999 – Received the 1998 SDRC Innovation Award for my role in developing the new, HTML based, Online Help Library for SDRC's I-DEAS product.

June 1997 – Received an SDRC Achievement Award for Process Improvement during the release of SDRC's I-DEAS 5.

Education

March 2023 – Completed "Python 3 for Beginners" course on Udemy (Certificate)

June 2019 – Completed "Thingworx for Developers" course by PTC (Certificate)

June 2000 – Attended the "Object Oriented Design Using C++" (UML) course given at SDRC (Certificate)

June 2000 – Attended the "Principles of Object Oriented Design" course given at SDRC (Certificate)

May 2000 – Attended the "XML for Programmers" course given by Data Channel Corp. (Certificate)

October 1996 – Attended the "UNIX/C++ Programming" course given by ITDC (Certificate)

January 1995 - "C++ Programming" at the College of Mount St. Joseph (4.0 GPA, 4 credit hours.)

November 1993 - "UNIX System Administration" training course given by ITDC (Certificate)

Associates Degree of Applied Business

Major: Computer Information Systems Programming

Cincinnati Technical College

November, 1992

References, screenshots, and demonstrations available upon request.