Robert T. Gruen

cell: 513.376.1945
Email: bob.gruen@gmail.com
LinkedIn: https://www.linkedin.com/in/bobgruen/

I am a passionate, **Senior Full Stack Software Engineer** with extensive experience in IoT platform development, data analysis and transformation, Business Intelligence *(BI)* development, and custom application development. I want to leverage my proven technical expertise to address your business needs with efficient, scalable technical solutions.

Professional Experience

06/22 – 01/24   ***Cold Jet***   ***Web Application Development Manager***

- Conceived, designed, developed and managed Cold Jet's IoT platform, "Cold Jet CONNECT". All products available at launch were completely designed and developed on my own time. This solution not only saves Cold Jet hundreds of thousands of dollars in annual licensing fees, but it is also more modern looking, responsive and performed significantly better than our previous solution, built using PTC's ThingWorx. CONNECT has several customer facing modes: single machine view, fleet management, and dealer management. All available in 8 languages. It also has a service view that provides meaningful insights allowing for proactive service and maintenance.
- Responsible for the database architecture and optimization(storing over 75 million records from over 3,500 machines in the field and handling thousands of queries per minute)
- Hosted and performed training sessions for sales and service staff around the globe
- Managed ongoing development of new applications on mycoldjet.com, Cold Jet's portal for employees and customers
- Managed, guided and mentored junior development staff

08/15 – 06/22   ***Cold Jet***   ***Web Application Architect***

- Conceptualized, designed and developed dozens of interactive, fully responsive, web based reports. Data was acquired from CSV and JSON based data feeds sent from the 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 built using HTML, PHP, MySQL, CSS, JavaScript, jQuery, Highcharts, etc.
- Responsible for the Apache, PHP and MySQL installations, configurations, management, and disaster readiness
- Created an Android application (using Java) for Service Technicians performing preventative maintenance inspections on Cold Jet machines. The data would then be sent to mycoldjet.com for review/analysis.

01/08 – 08/15   ***Cold Jet***   ***Senior Web Application Developer***

- Extended CRM (SalesLogix) functionality:
    - Developed functionality to search across accounts, leads, and opportunities. Created filters such as search by distance, etc.
    - Redesigned the sales proposals for the Sales and Marketing teams

- Implemented new, lead generating, application specific web sites such as dryiceproduction.com, dryicecleaning.com, mycoldjet.com and others
- 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 the global, 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 managers 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 service technicians 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 managers to configure 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
    - Business Intelligence – created many new dashboards and reports. Some key reports include: Sales by Quarter, Sales by Year, Sales MTD and YTD, Sales by Sales Manager (or by regional groupings), Sales by Industry, and more.

09/05 – 01/08 **Convergys**   **Specialist, Web Developer**
- Performed all PHP and database development on the 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 provides course scheduling, online registration, online and in-person deliveries, course evaluations, and reporting.
- Designed and developed a PHP Project Dashboard that captures key project information and reports on project metrics such as: Cost Performance Index (CPI), Schedule Performance Index (SPI) and others
- Developed BI (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 the global, 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 they are meeting Service Level Agreements (SLAs) with clients
- Developed a PHP application to securely serve training content to approved requesters
- Integrated Google Search Appliance to handle indexing of corporate site and site 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 code to track visitor usage (page loads, downloads, security events, etc.) for the Product Documentation web site. Created a dashboard based on this information.

03/01 – 05/02   **PlusSize.com**   **Lead Web Developer / CIO**
- Grew sales from ~$6K/mo to ~$24K/mo
- Increased the registered user base from 10,000 users to more than 100,000 users
- Increased traffic from 500 unique visitors per day, to over 7,000 unique visitors per day
- Directed and/or performed all design and development efforts at PlusSize.com
- Worked directly with key partners to integrate their products and promotions
- Managed company laptops, Linux web servers, Apache and MySQL
- Designed and created the product and member databases
- Implemented Perl code to parse XML files containing product data from vendors. The code would identify the products that were wanted on the web site, extract the relevant data and store it in the database.
- Designed, developed, delivered and tracked HTML emails for key partners such as: Jockey, Elisabeth, Procter & Gamble among many others

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 and UI prototypes.
- *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 (in the form of 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.
- Managed 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 & saved for the next release, my tools reduced the cost of localization by 27%.

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), SQLite (1 year), Java (5 years), Android (2 years), JavaScript (15 years), Perl/CGI (2 years), XML (1 year), AJAX (10 years), Apache (20 years), Responsive design/Flex (5 years), UI design (16 years)

- **Windows**
  Visual C++ (1 year)

- **UNIX**
  UNIX/C++ (1 year), UNIX/C (2 years), UNIX Shell Scripts (5 years)

Application Software & Frameworks

- Highcharts (5 years), ChartDirector, Adobe Photoshop (20 years), Adobe Dreamweaver, 3D Studio MAX, Blender 3D, MS Office (Word, Excel, PowerPoint), ThingWorx (1 year) 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, "Cold Jet CONNECT".

April 2021 – Won a quarterly award for the Cold Jet value of Innovation. Awarded for my work to design and develop the "Fleet Management" module in "Cold Jet 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 Spotlighting 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
*M*ajor: Computer Information Systems Programming
Cincinnati Technical College
November, 1992

References available upon request.