Goran Halusa

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Currently, I'm a Lead Application Developer for Science Systems and Applications, Inc. (SSAI), NASA/GSFC contract (Round 2).

In the past, I've had the honor of working for Quotient, Inc., working on the Smithsonian contract, Leidos Biomedical Research, Inc. (NIH/NCI), Science Systems and Applications, Inc. (SSAI), NASA/GSFC contract.

Earth Sciences, Biotech, Arts & Humanities, and finally circling back around to Earth Sciences... quite mind-blowing!

I've been a web developer since 1999. Some of my tools include PHP (Frameworks: Slim Micro Framework, Symfony 3.4+), MySQL, JavaScript, Vue.js, jQuery, Node.js (Frameworks: Express, Geddy, Restify), Drupal 7 & 8, WordPress, Apache SOLR, MongoDB, SQLite, Redis, Git, Docker, Twig Templates, Mustache Templates, Amazon Web Services (AWS), EJS, Ruby, Sinatra, Twitter API, and Google Analytics API.

Technical Skills

Likes: php mysql javascript jquery node.js symfony slim css html twitter-bootstrap jsonschema xml xslt mongodb vue.js docker

Experience

Lead Application Developer – Science Systems And Applications, Inc (SSAI) *Nov 2020 → Current*
drupal-9, docker, json, composer-php, yaml, javascript

NASA GSFC Contract - Earth Science Data Systems (ESDS) Program.

Web Developer – Quotient, Inc. *Feb 2015 → Nov 2020*
php, mysql, symfony, javascript, jquery, node.js, jsonschema, drupal, mustache, twig, twitter-bootstrap, apache, linux, redhat, git, xml, xslt, vue.js

PROJECTS

Digitization Program Office (DPO): Packrat (Platform for Complex Resource Administration)

The Packrat metadata repository provides a web-based user interface (UI) for ingesting assets and metadata pertaining to 3D models, and processing those assets leveraging the Cook 3D Model Processing Service.

Packrat's UI allows for the uploading of 3D models and respective metadata (master and derivative models) via any web browser. Two methods of ingest exist, the Simple Ingest UI for everyday users, and the Bulk Ingest UI, which is primarily geared towards advanced 3D professionals and requires an understanding of Smithsonian's 3D Metadata Model.

Archives of American Art (AAA): Website

AAA's Website provides digital access to the museum's extensive library of collections, oral histories, and digitized items. My primary focus has been in the automated processing and delivery of AAA's digital assets, with an emphasis on EAD-based finding aids (Encoded Archival Description).

In addition, I have contributed to AAA Website's robust search capabilities, a hybrid solution which leverages both Smithsonian's Enterprise Digital Asset Network (EDAN) and Smithsonian's Open Source Search (OSS).

National Air and Space Museum (NASM): Website

NASM's Website provides digital access to the museum's collections, objects, webcasts, and educational resources. My contributions been varied and largely centered on day-to-day operations, insuring consistency with the Website's overall functionality, administrative user support, and providing insight into future endeavours.

Museum Interactive Support System (MISS)

MISS is a robust system of application programming interfaces and content delivery mechanisms which allow sharing of content through Smithsonian's National Museum of African American History & Culture (NMAAHC) website, interactive exhibitions, mobile tours, and other digital channels.

With my primary role as the lead developer, I contributed to the MISS team on numerous levels, insuring goals and objectives were met during the initial development process leading up to the opening of NMAAHC's museum and subsequent launch of NMAAHC's interactive exhibitions.

Scientific Web Applications Developer – Leidos Biomedical Research, Inc. *Nov 2009 → Feb 2015*
php, mysql, javascript, jquery, slim, twig, gump, wordpress, drupal, apache, linux, debian, ubuntu-12.04, amazon-web-services, git, bitbucket, svn

Full-stack web developer for the National Cancer Institute's Advanced Biomedical Computing Center. I develop, design, and maintain websites and scientific web applications, implementing open-source technologies such as Object-Oriented PHP, Javascript, and MySQL, with deployment on Linux-based platforms. I'm constantly improving and building upon best practices and latest technologies. Well-versed at full life cycle project management, from conception, through deployment, and beyond.

Web Developer – NASA GSFC *Oct 2003 → Oct 2009*
php, mysql, javascript, perl, linux, centos, apache, squid

Web designer, programmer, and systems administrator for the Earth Observatory Website, Visible Earth Website, Laboratory for Atmospheres, and the Hydrospheric and Biospheric Sciences Laboratory at NASA Goddard Space Flight Center.

Details

I programmed NASA's Earth Observatory website from scratch (version 2.0, 2009). This entailed writing multiple PERL scripts to ingest 10 years of website data into a redesigned database schema and filesystem. I also developed a highly customized content management system to serve the needs of the highly talented staff of writers and data visualizers. I was also the systems administrator for the small server cluster, configured for high availability and redundancy.

Additionally, I built the first custom content management system and redesigned the public-facing websites for NASA's Atmospheric Science Research Portal and Hydrospheric and Biospheric Science Research Portal.

Web Architect/Animation Artist – Virtual Flow Interactive Media, Inc. *Oct 2000 → Jun 2003*
photoshop, adobe-illustrator, html, asp.net, coldfusion, flash, director

Lead Designer of cutting edge graphical interfaces for web sites as well as interactive CD ROMs using programs such as Flash 5 & MX, Director 8.5, PhotoShop 7.0, ImageReady 7.0, Illustrator 10, GoLive 6, Dreamweaver 4 & MX, Dreamweaver UltraDev, BBEdit 6.5, Final Cut Pro 2.0, and Strata 3D. Implemented acquired knowledge of hand coding HTML, CSS, JavaScript, ColdFusion and ASP (Active Server Pages), as well.

Graphic Designer – Image Associates, Inc. *Jul 1998 → Sep 2000*
photoshop, adobe-illustrator, html, powerpoint, dreamweaver

Developed real world, hands on graphic design skills at a full-service graphic design studio offering a variety of services including print, multimedia, web design and corporate presentations for shows and conventions.

This was my first position in the industry, after 12 years of cooking professionally. I obtained the paid internship position thanks to my awesome instructor, Paul Cacioppo at the School of Communication Arts in Raleigh, NC. (Thanks Paul!)

Education

Certificate in Computer Graphic Design – School of Communication Arts *1998 → 1999*
photoshop, adobe-illustrator, flash, macromedia

Graduated top of class. As a result, instructor offered me a paid internship at Image Associates, Inc.

Certifications

Global Information Assurance Certification (GIAC) in Web Application Security *2006 → 2006*
web, application, security

Projects & Interests

Node.js REST API – https://github.com/ghalusa/nodejs-rest-api *Jan 2015 → Jan 2015*
node.js, javascript, mongodb, twitter-bootstrap-3, jquery

A RESTful API Using Node.js

An exercise in creating a REST API using Node.js

node-load-tweet – https://github.com/ghalusa/node-load-tweet *May 2013 → May 2013*
node.js

A small node.js script which posts a linux server's load and uptime to your twitter timeline.

Author

Wordpress-Home-Page-Banner-Images – https://github.com/ghalusa/Wordpress-Home-Page-Banner-Images *Mar 2012 → Mar 2012*
php, wordpress

A Wordpress plugin to help manage rotating banner images

Author

Public Artifacts

Panorama: a targeted proteomics knowledge base. — PubMed – http://www.ncbi.nlm.nih.gov/pubmed/25102069 *Sep 2014*

Panorama is a web application for storing, sharing, analyzing, and reusing targeted assays created and refined with Skyline,1 an increasingly popular Windows client software tool for targeted proteomics experiments. Panorama allows laboratories to store and organize curated results contained in Skyline documents with fine-grained permissions, which facilitates distributed collaboration and secure sharing of published and unpublished data via a web-browser interface.

CPTAC Assay Portal: a repository of targeted proteomic assays — Nature Methods – http://www.ncbi.nlm.nih.gov/pubmed/24972168 *Jul 2014*

A growing trend in protein quantification is a targeted mass spectrometry (MS)-based technology called multiple reaction monitoring (MRM) or selected reaction monitoring (SRM). Here, we present the Clinical Proteomic Tumor Analysis Consortium (CPTAC) Assay Portal http://assays.cancer.gov/, a public repository of well-characterized, MS-based, targeted proteomic assays.

WordPress, Drupal, or a Custom Solution? — Medium – https://medium.com/gor-stuff/wordpress-drupal-or-a-custom-solution-de911342e028 *May 2014*

There are multiple ways to get things done... Often times we implement a Content Management System (CMS) such as WordPress or Drupal for the underlying framework of a website. Doing so allows the end-user to have the means to update their website content whenever needed. There are other situations where WordPress or Drupal are not the answer, and a custom solution is necessary.

Non-B DB v2.0: a database of predicted non-B DNA-forming motifs and its associated tools — Nucleic Acids Research – http://nar.oxfordjournals.org/content/41/D1/D94.full.pdf+html *Nov 2012*

Regina Z. Cer, Duncan E. Donohue, Uma S. Mudunuri, Nuri A. Temiz, Michael A. Loss, Nathan J. Starner, Goran N. Halusa, Natalia Volfovsky, Ming Yi, Brian T. Luke, Albino Bacolla, Jack R. Collins and Robert M. Stephens. Nucl. Acids Res. (2013) 41 (D1): D94-D100. doi: 10.1093/nar/gks955

The non-B DB, available at http://nonb.abcc.ncifcrf.gov, catalogs predicted non-B DNA-forming sequence motifs, including Z-DNA, G-quadruplex, A-phased repeats, inverted repeats, mirror repeats, direct repeats and their corresponding subsets: cruciforms, triplexes and slipped structures, in several genomes. Version 2.0 of the database revises and re-implements the motif discovery algorithms to better align with accepted definitions and thresholds for motifs, expands the non-B DNA-forming motifs coverage by including short tandem repeats and adds key visualization tools to compare motif locations relative to other genomic annotations. Non-B DB v2.0 extends the ability for comparative genomics by including re-annotation of the five organisms reported in non-B DB v1.0, human, chimpanzee, dog, macaque and mouse, and adds seven additional organisms: orangutan, rat, cow, pig, horse, platypus and Arabidopsis thaliana. Additionally, the non-B DB v2.0 provides an overall improved graphical user interface and faster query performance.

Others

Background – Background *Feb 2015*

10 Year Overview

Quotient, Inc.

Smithsonian Contract - Role: Provide innovative technical solutions for the digitization effort for millions of Smithsonian assets.

Leidos Biomedical Research, Inc. (NCI)

Scientific Web Applications Developer, with Leidos Biomedical working at the Advanced Biomedical Computing Center (ABCC) at Ft. Detrick. The center provides scientific computing, modeling, imaging, and bioinformatics support.

At Leidos Biomedical, Inc., I developed websites and web applications for the National Cancer Institute, the primary customer of Leidos Biomedical. The job entailed working on problems quite complex in nature, with extensive requirements analysis, application development, user interface design, testing, verification, and maintenance. I normally received little to no in-depth instructions for the work, just general instructions on new assignments. We generally worked independently with minimum supervision, but regularly coordinated and collaborated with one another, working through complex technical situations.

Sigma Space/SSAI (NASA)

I spent 6 years at NASA's Goddard Space Flight Center, working for Science Systems and Applications, Inc. and then - when the contract changed - the Sigma Space Corporation. During that time, I supported NASA's Earth Observatory team and NASA's Atmospheric Sciences and Hydrospheric and Biospheric Research Laboratories.

When I came onboard in 2003, I proceeded to build the first custom content management system and redesigned the public-facing websites for NASA's Atmospheric Science Research Portal and Hydrospheric and Biospheric Science Research Portal. This was before Content Management Systems such as WordPress, Drupal, and Joomla were a thing. Each Laboratory had their main sections, but also had multiple Branches, which required mini "sub-sites" to be built into the mix. Before that, they were basically running websites from ad-hoc servers residing under scientist's desks.

Halfway through my time at NASA, I got the opportunity to help out the Earth Observatory team with the redesign of their website. The Earth Observatory website is an online publication which shares images, stories, and discoveries about climate and the environment that emerge from NASA's research, including its satellite missions, in-the-field research, and climate models.

At that point, the Earth Observatory was around for nearly 10 years with little to no updates to their infrastructure and overall design.

I proceeded to program the Earth Observatory website from scratch. This process took roughly a year to accomplish, with version 2.0 launching in 2009. The work entailed writing multiple PERL scripts to ingest 10 years of website data into a redesigned database schema and file system. I also developed a highly customized content management system to serve the needs of the Earth Observatory staff (writers and data visualizers). To top it off, I was the systems administrator for the server cluster, and configured it for high availability and redundancy.

Readings

Object-Oriented PHP: Concepts, Techniques, and Code – Peter Lavin – http://www.amazon.com/Object-Oriented-PHP-Concepts-Techniques-Code/dp/1593270771%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1593270771

Learning PHP 5 – David Sklar – http://www.amazon.com/Learning-PHP-5-David-Sklar/dp/0596005601%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D0596005601

Pragmatic Version Control Using Git (Pragmatic Starter Kit) – Travis Swicegood – http://www.amazon.com/Pragmatic-Version-Control-Using-Starter/dp/1934356158%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1934356158

The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses – Eric Ries – http://www.amazon.com/The-Lean-Startup-Entrepreneurs-Continuous/dp/0307887898%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D0307887898

Rails: Up and Running – Bruce A. Tate, Lance Carlson, Curt Hibbs – http://www.amazon.com/Rails-Running-Bruce-A-Tate/dp/0596522002%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D0596522002

Learning Rails 3 – Simon St. Laurent, Edd Dumbill, Eric J. Gruber – http://www.amazon.com/Learning-Rails-Simon-St-Laurent/dp/144930933X%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D144930933X

Node.js for PHP Developers: Porting PHP to Node.js – Daniel Howard – http://www.amazon.com/Node-js-PHP-Developers-Porting/dp/1449333605%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1449333605

Smashing Node.js: JavaScript Everywhere (Smashing Magazine Book Series) – Guillermo Rauch – http://www.amazon.com/Smashing-Node-js-JavaScript-Everywhere-Magazine/dp/1119962595%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1119962595

Modern PHP: New Features and Good Practices – Josh Lockhart – http://www.amazon.com/Modern-PHP-Features-Good-Practices/dp/1491905018%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1491905018

Backbone.js Patterns and Best Practices – Swarnendu De – http://www.amazon.com/Backbone-js-Patterns-Best-Practices-Swarnendu/dp/1783283572%3FSubscriptionId%3DAKIAIIBINOD46VC3JCLQ%26tag%3Dstackoverfl08-20%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953%26creativeASIN%3D1783283572

Vue.js In Action – Erik Hanchett – https://www.manning.com/books/vue-js-in-action

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React In Action – Mark Tielens Thomas – https://www.manning.com/books/react-in-action

Tools

First Computer:	Blueberry iMac
Favorite Editor:	Sublime Text 3