Ronald Reck

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SUMMARY

Active DoD Top Secret Clearance & FBI Counterintelligence Polygraph, creative UNIX/Linux specialist with two degrees in Linguistics, published author, enterprise architect is capable of managing a team or solving the problems no one else can. Author of commercial ARTIFICIAL INTELLIGENCE software **Predictive Analytics Framework** on Amazon Web Service Marketplace/C2S (Released more than 8 years ago 01/21/2015). 18.+ Years of Amazon Web Services experience. AWS Marketplace publisher of 11 data products that have been online since 2019. Recent projects include: advanced customer segmentation (AI), NLP on biomedical research (summation/ AI) and FAERS compliance. Legal contract NLP/NLU (this is generative AI), docker swarm using Prometheus/Grafana, computer vision using OpenCV (machine learning), **Advanced Artificial Intelligence and machine learning**, language analysis using social network analysis and sentiment detection(AI)

CORE SKILLSET

All UNIX & Linux variants   Solaris, CentOS/RedHat, SuSE, Ubuntu, Slackware

Relational (SQL), / NoSQL / RDF Databases: Virtuoso, MySQL/MariaDB, Couchbase, MarkLogic, MongoDB, Allegrograph, Oracle, PostgreSQL, SyBase, BDB, Lucene, SOLR / Elastic Search/ELK

Languages: R/RMarkdown, Perl, Shell**,** PHP, Tk, Sed, AWK, SQL, Pascal, C, Basic, LISP, Prologue, Python

Analytics- Predictive Analytics, Categorization, Generalized Artificial Intelligence, Machine Learning, Artificial Intelligence, Natural Language Processing, Regressions, PCA, Survival Analysis, GGPLOT, Shiny Server

Internet & Web expert: Drupal, Wordpress, PHP, Perl, HTML, XML/RDF(S)/OWL, CSS, Javascript, SOLR, elasticsearch, database, mailman 2&3, intelligent agents, knowledge representation, security, firewalls, IPTables, data conversion, TCP/IP, HTTP, SIP, VOIP, QoS, Asterisk, Configuration Management, Cloud/Virtualization, LAMP/LEMP

Entire GNU UNIX: Computer vision (OpenCV), Amazon Web Services (AWS), cloud, Docker, Docker Swarm, Shell, shell scripting, administration, automation, DevOpts. security, tuning, disk management, application development, full software life cycle, configuration management, technical documentation, service level agreements, content management, knowledge representation, horizontal scaling,

Participant: W3C Government Linked Data Working Group (invited expert), W3C Social Web XG (invited expert), W3C GRDDL Working Group (invited expert), StratML Working Group, W3C Social Web Incubator Group (invited expert status), Contributing Editor- Financial Information Services Division of the Software & Information Industry Association, Cognitive AI Community Group, Data Privacy and Controls Community Group, AI KR (Artificial Intelligence for Knowledge Representation) Community Group, Linked Data for Language Technology Community Group.

EDUCATION

EASTERN MICHIGAN UNIVERSITY
Master of Arts – English Linguistics 04/07
- Linguistics - Computational linguistics, morphology/syntax, theoretical syntax (generative grammar).
- Natural Language Processing, computational & rule based algorithms, information theory.
- Syntactic parser in Perl, verb phrase structure, cross-cultural temporal abstraction, semantics.

WAYNE STATE UNIVERSITY
Bachelor of Arts - English Linguistics 06/92
- Linguistics – theoretical (transformational) syntax (generative syntax), morphology, and semantics.

WORK EXPERIENCE

Technica Corporation
Subject Matter Expert 09/23 – Current
- Onsite at The Federal Bureau of Investigation - global admin - Granted VAR, with CI-Poly
- Multiple required certifications and training. - (Child Abuse, Insider Threat, OPSEC, Privileged User, Media)
- Enterprise application support across enclaves.
- Design and implemented workflows, ATO, REST, automation, HAProxy, HA database, Atlassian Suite

RRecktek LLC.
100+ Confidential Clients Including:
Johnson & Johnson, Department of Education - DHS Identity Credential & Access Management (ICAM) inside USCIS- Defense Technology Information Center (DTIC)(Fort Belvoir) - Transaction Network Systems -Victor Securities- Skye Suh PLC Yudrio Inc.- Eastman Kodak –Navanti Inc.

Consultant ~ 09/09 –Present
- Designed, implemented elastic search for identification of Harmonized Tariff codes; parameter optimization techniques.
- Designed, implemented SOLR repository for RFP/SOW/RFI, and repository for law firm contracts with multiple native formats. De-duplication, optimization, shards.
- Designed, implemented NLP processing pipeline for abstractive / extractive and NER multiple domains
- Designed, implemented unsupervised categorization for customer (20k) segmentation.
- Designed, implemented vector based semantic comparison on 700k news articles.
- Designed, implemented, load, query. UI semantic modeling all FDA FAERS pharmacovigilance (25MM records ~ 252Gb). All schema elements in ICH ICSR E2B(R2). >1.1Billion triples. Shiny dashboard
- Designed and implement semantic modeling for vocabularies: Company Product Dictionary, and MedDRA versions 23-25, ISO3166, RDF, SKOS, RDFS, Mark Logic
- Designed and deployed complex enterprise monitoring solution based on Docker Swarm, Prometheus, Grafana. Used to monitor thousands of containers across multiple networks and environments.
- Designed commercial cloud based Predictive Analytics Framework leveraging python problem solvers, highly optimized R, robust Drupal capability, and Resource Description Framework visualization.
- Optimized R programming language using CAIRO, Tcl/Tk, and RMarkdown.
- Recommended and implemented automation of RedHat STIG hardening and best practices across a large government agency's Identity, Credential and Access Management component.

- Assembled and lead team for rapid development of advanced crowd-sourcing social media framework, with SMS & gamification running under LAMP stack.
- Architected and deployed (devopts) automated machine configuration capability for multiple versions of Redhat & CentOS running under VMWare. Improvements to operating system security for PCI Compliance.
- Architected, managed and implemented trust based system for determining information veracity (Drupal).
- Responsible for data model for multi-million dollar project's data sharing product using RDF storage.
- Created extensions for using JIRA for timesheets and managing troubletickets
- Designed and implemented financial forecasting website for Reserve Studies (Drupal).
- Contributed to the design of cutting edge white hat security methodologies.
- Technical writing and grammar for winning RFP's and well received RFI's.
- Developed system for alignment of sentiment in SEC filings using R and RMarkdown.

SanCorpConsulting

Chief Technology Officer: / Senior Technical Advisor 05/20 – 06/21
- Senior Technology Advisor inside the Department of Defense Joint Artificial Intelligence Center (JAIC)
- Assigned to Data Science and Artificial Intelligence Team
- Function as senior-most Data Science oversight on projects enjoying tens of millions in funding spanning all branches of the military.
- Designed natural language processing pipeline for "successful" projects that received additional funding
- Drove process for security hardening of R containers in cloud-based R development environment.

Inxight Federal Systems – SAP Government Support and Services

Lead Client Manager ~ 03/08 – 09/09

- Designed and Implemented distributed sentiment analysis framework used for the analysis of 800 thousand Reuters articles.
- Promoted and shaped the StratML standard.
- Implemented controlled vocabularies for sentiment adjectives, verbs and nouns.

Collexis Inc.

Chief Technology Officer- Americas~ 02/07 –02/08

- Responsible for product packaging and delivery throughout North America.
- Promoted SKOS compliance as a supported format.
- Forged an enterprise approach to thesaurus management.
- Responsible for new domain thesauri:
    - Aviation, Vehicles, Weapons, Geographic Entities, Gangs, Nationalities, Races

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Factiva
Consultant ~ 11/06 –02/07
- Designed RDF capability for Synaptica Knowledge Management Tool.

Intelligence Community Metadata Working Group Staff
Senior Software Engineer ~ 1/05 –10/06
- Tasking under Executive Order 13356.- Technologies include XML, RDF, OWL, XSLT, VMware, Authority Files, Requirements, Design, Development, Security, COTS, Validation, Standards.
- Develop Strategies and Standards for data sharing for 16 Intelligence Communities.
- As technical Lead for Controlled Vocabulary Management System responsibilities included:
    - Forumulation of detailed formal requirements.

- Review and selection of COTS product for vocabulary management.
- Creation of use cases, test cases, quality control, access control, workflow, documentation, data models, concept of operations, accreditation, integration, and deployment.
- Standards based vocabularies using Z39.19 and Zthes specifications.
- Extension of system to include Simple Knowledge Organisation System (SKOS) format.
- Modeling of International Standards Organization and OASIS standards.

Technical Lead ~ 11/04 – 9/05
- [Seattle LInX Project](#) for Naval Criminal Investigative Service – Data warehouse of law enforcement data from a plethora of agencies. Brought in a team of contractors to re-architect and implement J2EE application front ended by Tomcat, Sun Application Server, Web Logic. Technologies include XML, SVG, BPML, L&C, MS Windows, PVCS, Ulytix, Oracle, Sun Solaris, Intalio, Initiate, OpenSTA, Quality Control, UAT,SSL, Certs.

Science Applications International Corporation

Senior Software Engineer ~ 03/03 – 12/04
- Re-Engineered 100+ node network and all supporting services – NFS, NIS, DNS, Raptor Firewall, HTTP, NetScreen VPN, CVS, Clearcase, Ntop, AMANDA. Redhat, Solaris, IRIX.
- Integration & testing for major components of Terrorist / Total Information Awareness (TIA) software.
- Created comprehensive documentation for the implementation of Structured Discovery Thread – Analysis of unstructured data – Latent Semantic Indexing, JBoss, JMS, RSS, Oracle, data conversion, metrics.
- Proposed environment and security standards for RDEC Program Redhat AS systems.
- Designed and implemented application for semantic analysis of unstructured data using Tokenization, Stemming, Self Organizing Maps, and Wordnet:: Similarity in Perl.
- Created tool to convert XML Topic maps and RDF into Scalable Vector Graphics.
- Designed and Developed NISPOM security compliance strategy adopted by Future Combat Systems.

University of Maryland, Institute for Systems Research

Project Leader – [MINDLAB/MINDSWAP](#) ~ 02/02 – 03/03
- Designed and deployed web site using PHP & Redland RDF Application Framework.
- Created online search engine for searching across the DAML ontology library.
- Created Windows software for converting Excel spreadsheets into RDF format.
- Designed and deployed entire online infrastructure.
- Designed and deployed complex data conversion procedures for Parka database.
- Attained World Wide Web Consortium membership status.
- Prepared Parka research for presentation at First International Semantic Web Conference (ISWC).

ITisOpen (Optimally Open Solutions Inc.)

Director of Web Architecture ~ 05/01 – 02/02
- Designed process for web publication from Adobe Framemaker.
- Designed and implemented corporate Intranet.
- Designed, documented and implemented 2 tier web publication architecture.
- Designed and implemented search engine for Mailman (mailing list software).

Winstar Communications Inc.

Principal Information Architect ~ 07/98 – 03/01
- Designed and implemented complex system and process for the publishing of technical information.
- Designed and implemented scalable system for web representation of infrastructure topology.

- Drove corporate data standards – WWW publishing standard, Network File and Directory Naming.
- Designed and coded scalable robust solutions for textual navigation and organization.
- Firefighting, Y2K network readiness, Collector, billing systems, contract/document management.
- Perl 5, Sun & Solaris, BMC, Linux, BSD, Samba, TCPD, Apache, GNU toolset, Python/Zope, Frontpage97, Frontpage98, Word 7.0 & 7.0a, Excel 7.0, Excel 98, Word 98, AutoCAD R14, Paintshop Pro, Adobe Photoshop.

The Allied Group Inc.

Systems Engineer ~ 08/99 - 03/00

- Earned Sun Enterprise and Workgroup Certification, BMC Patrol Certification.
- Sun high-availability Oracle cluster tuning.
- Corporate Intranet lead architect (170 sites), WWW standards and content management.

Electric Press Inc.

Enterprise Architect ~ 11/98 - 01/99

- Designed and implemented system for making snapshots of operating environments.
- Designed migration path for re-engineering infrastructure - security, network, backups.
- Configured and installed Sendmail, TCPD, HTTPD, SSHD, GCC, GNU tools.
- Electronic Commerce and recovery of United States Information Agency from HACKER attack.

Federal Communications Commission

Webmaster and Senior UNIX Administrator ~ 03/98 - 07/98

- Jurisdiction in both Universal Licensing System and FCC Auctions.
- Designed and implemented standards for development, staging, and production environments in accordance with Inspector General guidelines.
- Designed, coded, and maintained web and system security, web metrics.
- Key encryption, advanced networking, firewall, proxies, security standards.
- Sapphire, Netscape, Sybase, Jaguar, Java, TCPD, rsh, DNS, HTTP, HTTPS.

Digital Encryption Systems Inc.

Director of Online Services ~ 04/97 -01/2007

- Designed and deployed system for the population of legal forms from MS Access.
- Designed and implemented Legato/ORACLE hot backups for STANDARD & POOR's 2M dollar webfarm.
- Designed, coded, and maintained web security, database, metrics, and searching systems.
- Designed and supervised Legacy extraction task from MUMPS using NeXt web objects.
- Designed, coded, and maintained real-time reporting systems for modeling environment.
- Staged systems development, security, SSH, SSL, PGP, NFS, DNS, Sendmail, PERL.
- TCP/IP, Apache, Netscape, Open Market, Solaris 2.6, NeXt, FreeBSD, Linux, TIS Firewall.
- Web publishing, data conversion, scalable architectures, and COTS integration.

The Council of Better Business Bureaus

Senior Technology Expert - Internet Systems ~ 06/97 - 03/98

- Designed, coded, and maintained web security, database, statistics, web publishing, text searching systems for 150+ Bureau websites.
- Designed, coded, and maintained web publishing systems for sites up to 225 pages.
- Data conversions, proprietary log parsing, web monitoring of fax server and system errors.
- Designed, coded network monitoring system that aided in recovery of $17K from our ISP.

- Staged Solaris 2.5.1 environment for development in Perl, and UNIX shell with GNU tools.

Eastern Michigan University • Texas A & M University
Technical Editor of [LINGUIST](), Senior Editor, Systems Engineer ~ 10/92 - 02/97
- LINGUIST is the largest academic newsletter on Internet, and arguably the most influential of journals in the field of Linguistics. Over 8000 subscribers to 2000+ issues per year = 10 per day.
- Several million messages annually, LISTSERV, EMAIL systems.
- Ultrix, SunOS, Solaris, shell scripting, all C and Bourne shells.

Inside Ford Motor Company 's WWW Organization
Data Center Administrator, New Media Architect ~ 11/96 - 02/97
- Staging, maintenance, and support of entire data center Solaris (2.5.1) environment.
- Developed service level agreement between the W3 group and its customers (other parts of Ford).
- Designed, coded, and implemented network monitoring software to contact beepers.
- Designed, coded, and implemented global web activity statistics system.
- Designed, coded, and maintained web security system.

Ford Motor Company 's CTIS (Corporate Technical Information System)
and Information Management Department
POSIX Network Administrator, Senior Web Developer ~ 10/95 - 11/96
- Staging, maintenance, and support of 15+ POSIX based enterprise systems.
- Supported operating systems - Solaris 2.3, 2.5.1, IRIX 5.3, Linux Caldera (Redhat), FreeBSD.
   Multiple Supported Machines: Sun E5000, Sun E3000, SGI INDY, SGI CHALLENGE S.
- Installed and configured multiple peripherals - CDROM, DAT drives, SSA, Exabite stacker.
- Agent technology, designed and maintained Spider for cataloging corporate network.
- Designed, Coded, Implemented, and Supported company wide web feedback system.
- Designed, Coded, Implemented the web security system for databases moved from VM.
- Member of 3 member technical subcommittee WSL (web single login) adopted by FORD MOTOR COMPANY as a solution to web security. Using cookies, SSL, cross server, cross platform.

AWARDS & CERTIFICATIONS

- CyberAwareness Challenge 2021
- Identifying And Safeguarding Personally Identifiable Information (PII)
- DoD Annual Security Awareness Refresher 2021
- Insider Threat Awareness
- OPSEC Awareness for Military Members, DoD Employees and Contractors 2021
- Unauthorized Disclosure of Classified Information for DoD and Industry 2021
- Introduction to Information Security
- Awarded Outstanding Service Award by Eastern Michigan University Linguistics.
- Earned Sun Enterprise and Workgroup Certification, BMC Patrol Certification.

SELECTED PUBLICATIONS, PAPERS, POSTERS & PRESENTATIONS

- *Reck, Ronald, Suh, Tong Sun.* **Detecting Bias and Prejudice Online: It's Not Just Black and White***. KMWorld, Text Analytics Forum .Washington, DC.November 2020*

- *Reck, Ronald, Suh, Tong Sun.* **Using Graph Theory to Scale the Border Wall***. Graphorum .Chicago, IL. October 2019*

- *Chubirka, Michele, Reck, Ronald P.* **Thin Slicing a Black Swan: A Search for The Unknowns***. RSA Conference. San Francisco, CA. February 2013.*

- *Halpin, Harry, Reck, Ronald P.* **Vocabutek: An Electronic Auction of Knowledge for Linked Data***. Artificial Intelligence Meets the Web of Data. Montpellier, France. August 2012.*

- **Using Semantic Web Technology for Access Control,** *Information Systems Security Association. Washington D.C. September 2011.*

- *Reck, Ronald P., Kenneth B. Sall and Wendy A. Swanbeck. "[Determining the Impact of Eric Clapton on Music Using RDF Graphs: Selected Challenges of Semantics Across and Within Datasets."](#) Presented at Balisage: The Markup Conference 2011, Montréal, Canada, August 2 - 5, 2011. InProceedings of Balisage: The Markup Conference 2011. Balisage Series on Markup Technologies, vol. 7 (2011). doi:10.4242/BalisageVol7.Sall01.*

- *Requirements for a Taxonomy Management System, The Open Group - Semantic Interoperability: Enterprise Vocabulary Workshop. June 2009.*

- *Baden, David, Reck, Ronald P. Using the Resource Description Framework (RDF) to Simplify Content Management, National Association of Broadcaster's Engineering Conference. Las Vegas, Nevada April 2009.*

- *Reck, Ronald P., Sall Kenneth. Sentiment Detection in Open Source Information for the United States Government , XML-in-Practice 2008. Arlington, Virginia. December 2008.*

- *Meeting NISPOM Chapter 8 Compliance in the Linux Operating System, Information Systems Security Association. Washington D.C.. November 2008.*

- [Generating and Rendering String Frequency Measurements of Project Gutenberg Texts: Using Resource Description Framework to Present Textual Metadata](#)*, VDM Verlag. ISBN-10: 3836494515. ISBN-13: 978-3836494519. May 2008*

- *Graef, Jean and Reck, Ronald P. Pre-rountable primer: Ontologies & the Semantic Web. Montague Institute. November 2007.*

- *Generating and Rendering Readability Measurements of Project Gutenberg Texts*, The 4th Corpus Linguistics Conference. Birmingham, England. July 2007.

- *Applying RDF Site Syndication (RSS) and Zthes to International Standards Organization (ISO) Standards*, The 4th International Conference on Cybernetics and Information Technologies, Systems and Applications. Orlando, Florida July 2007.

- *Generating and Rendering String Frequency Measurements of Project Gutenberg Texts*, Master's thesis. Eastern Michigan University, Ypsilanti, Michigan. April 2007.

- Sall, Kenneth and Reck, Ronald P. *Applying XQuery and OWL to The World Factbook, Wikipedia and Project Gutenberg*, XML 2006. Boston, MA, December 2006.

- Beckman, Tom and Reck, Ronald P. *Issues in Knowledge Representation and Semantic Interoperability,* 5th Semantic Interoperability for E-Government Conference. McLean, Virginia, October 2006. Special Recognition Award for the Best Exhibit.

- *Metadata Cards for Describing Project Gutenberg Texts* , OntoLex 2006: Interfacing Ontologies and Lexical Resources for Semantic Web Technologies. Genoa, Italy, May 2006.

- Sall, Kenneth and Reck, Ronald P. *Implementing a Government-wide Semantic Solution to Thesauri*, XML 2005. Atlanta, Georgia, November 2005.

- *Doing Justice to Data Standards: The Global Justice XML Data Model* (GJXDM), International Conference on Politics and Information Systems Technology and Applications. Orlando, Florida, July 2005.

- John Terpstra, Paul Love, Ronald P. Reck, Tim Scanlon. **Hardening Linux**. McGraw Hill Osborne Media. ISBN: 0072254971, August 2004.