JOHN S. ANDERSON

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SENIOR HANDS-DIRTY ARCHITECT – SUMMARY

Experienced Senior DevSecOps and Full-stack Cloud Engineer and Architect, with wide variety of exposure to multiple industries. Agile team lead and mentor. Passionate about delivering useful features to users, building reliable systems, and reducing toil. 10+ years experience.

INDUSTRIES SERVED

Publishing and Retail:	Through the Wardrobe Books, Target
Christian Ministries:	Wycliffe Bible Translators, SIL, Network of Giving, GCM
Energy:	R. L. Laughlin & Company (RLLCO)
Finance and Audit:	Raymond James, PwC, Horizon Investments
Government:	CGI Federal, software used by FBI, VA, and others
Medicine and Healthcare:	Pfizer, Cigna
Media:	Discovery, Stratus Video
Technology:	Canonical (makers of Ubuntu), Rackspace
Security-related:	SAP NS2, Soltra, Interos

NOTABLE IMPACT

"Speak softly and carry a big test suite." - When a large application incorporated an AI Chatbot, management lacked confidence about the underlying data quality. I wrote automated tests to ensure a variety of scenarios were covered properly, thus enhancing trust in the chatbot's responses.

Big Data Clone Army (on Demand) – Pfizer faced a growing flood of Big Data: thousands of biometric device files, several GB each, and more to come. I built the *Massively Scalable Pipeline* (AWS and Kubernetes). It can churn through **1,000+ Big Data files in 30 minutes or less**. (And then, to save operating cost, it **scales back down to zero**.)

"**Not the droids you're looking for**" – PwC's Containers team was building one-off microservices and struggling to satisfy customer demand for more. My *Astromech Developer Platform* streamlined development, so the team could focus on delivering value, and trust robots (GitHub Actions workflows) to enforce code quality and consistency, all running in-cluster. In 2024, Astromech grew to include 12 Software Products, with **all builds completing in parallel in 10 minutes or less**.

"**Show me the money!**" – RLLCO calculated sales percentages for Natural Gas producers each month, but when the numbers didn't come out right, RLLCO senior management was forced to sift through code and data to determine root causes. I built a new *Sales Allocation System* from the ground up, so that anyone could easily follow the mathematical calculations and **verify that millions of dollars were correctly allocated down to the dollar**. The new system produced **a full audit trail in minutes (instead of hours)**, and **prevented the departure of the company's largest customer**.

Band-aids on a Battleship – RLLCO processed hundreds of Natural Gas charts each day, but UI errors were killing productivity. I added *Recoverable Error Reporting* throughout, so that users could recover from UI errors, and so that the development team could capture insights into root causes. **By fixing the top 7 bugs, I improved 99% of UI stability issues in the first week.**

Supersonic feedback – RLLCO's data entry operators keyed data fast, but mistakes slipped through, frustrating customers who threatened to take their business elsewhere. I created the *Quick Reports System* to find issues after-the-fact, and the *Business Rules Engine* to detect issues even before save. Both systems were based on server-side T-SQL and Stored Procedures, so **custom Reports and Business Rules could be created, updated and deployed to all users in minutes** without the need for recompiling or reinstallation of the desktop client.

FULL EMPLOYMENT HISTORY

Target (via Insight Global) – Remote/Minneapolis, MN

April 2026 to November 2026

Warehouse Automation Integration Software Consultant

- Delivered a solution that **worked the first time**—a first for Target with this tech stack.
- Built, tested, and deployed this middleware solution to enable machine-built packaging of products, scalable up to 10,000 packages per day, equivalent to dozens of team-members and enabling Target to **hit production goals for the rush season 2026.**
- Mentored a team of developers during a steep learning curve with proprietary tech.
- Identified opportunities for improvement across the technology stack.

Raymond James Financial (via Noblesoft Solutions LLC) – St. Petersburg, FL

April 2025 to March 2026

Senior Software Engineer (Python, AWS, RAG)

- Main code contributor for distributed Python microservices pipeline for ingesting content into vector knowledgebase used for semantic search and AI chatbot integrations
- Enabled AI/ML microservices to run on AWS with GPUs by migrating them to FastAPI
- Championed move from outdated Flask to modern asynchronous FastAPI for performance across the organization
- Coordinated multiple projects in modernizing their Python code and practices, while aligning with Architecture and DevOps standards
- Mentored developers in world-class engineering best practices, esp. for Python

- Architected solutions in AWS and on-prem Kubernetes and individually contributed code, performed peer reviews, and organized work according to Agile Scrum

CGI Federal (via Solution Street LLC) – Remote/Herndon, VA

September 2024 to March 2025

Software Consultant

- Implemented RAGAS (RAG Assessment), to measure relevancy and accuracy of Chatbot responses and enable directional improvement of AI Quality of Response.
- Automated consistency checks for AI/LLM data ingestion with a variety of vector databases (Azure AI Search, AWS OpenSearch, and PostgreSQL pgvector) and LLMs (Azure OpenAI and AWS Bedrock).
- Enhanced AI chatbot responses, specifically centering around linkable citations and text effects (tables, lists, bullet points, etc.)
- Improved quality of responses, such as elimination of duplicate citations returned by the LLM (via LangChain).
- Authored documentation and built tools for the Bot Masters team, to increase developer productivity and joy.

Anderson Innovative LLC – Seminole, FL

July 2024 to September 2024

Market Research Consultant

- Researched employment opportunities across multiple industries (tech and others).
- Consulted local business and drafted contract to address their IT support needs.
- Enhanced social media presence.

PriceWaterhouseCoopers (via InsightGlobal) – Remote/Tampa, FL

April 2022 to June 2024 (maximum contract extension)

Senior Python Developer

- Architected and built bespoke Platform Engineering developer monorepo codebase to standardize the developer experience, enforce consistency in builds, and reduce toil. (GitHub Actions, skaffold, bash, Hashicorp Vault, Kubernetes)
- Led the team and contributed individually to the codebase (primarily Python and bash), writing new features, updating existing features, fixing bugs, removing unused code, and refactoring common functionality into tight, reusable Python modules.
- Setup and maintained automation, including automated tests, infrastructure management, and publication of our user and developer documentation.

- Wrote clear documentation for developers (with diagrams and examples from our codebase and how to use it) and for customers (with screenshots and examples about how to use our products).
- Secured deployments by aggressively gathering Secrets into Hashicorp Vault and building automation to deliver those Secrets to various contexts, including Kubernetes clusters, development clusters, and GitHub Action Environment Variables and Secrets.
- Improved communication with customers and stakeholders by automating document generation into our Pull Request process, so that updates are published it to an internal site that everyone could access.
- Enabled customers to interact with multi-cloud services by building microservices (Python, FastAPI, asyncio) and CLI utilities (Typer), including:
- On-boarding Kubernetes clusters to Prisma Cloud Compute (FKA Twistlock), an enterprise workload security scanning tool. This also included User management and off-boarding functions and put me in direct contact with Palo Alto, the vendor for Prisma Cloud Compute to resolve issues in their product.
- Improved security by automating SPN Credential rotation for Microsoft Azure Kubernetes clusters, using Hashicorp Vault.
- Imposed sanity by reorganizing legacy GitOps deployment repository for clarity and maintainability (Flux CD v2, GitHub).
- Reduced toil for developers by building handy tools like an SSL Certificate checker to triage issues with HTTPS microservice certificates.
- Interviewed potential candidates, on-boarded new hires, and provided continuing guidance and peer advice for team members; Agile Scrum, GitHub peer reviews, architectural and roadmap planning.
- Provided clarity by capturing many detailed User Stories (MS ADO), working notes (Confluence), end-user docs (Antora, PlantUML) and developer docs (README, CHANGELOG, GitHub).
- Set up the team and others for future success by evangelizing GitOps with Kubernetes, ArgoCD/Flux CD v2, and vclusters.

Interos, Inc. - Remote/Arlington, VA

April 2021 to April 2022

Senior Python Engineer

- Juggled complex and fast-changing requirements to hit a critical release target, so the company could obtain Series-C funding and reach “unicorn” status ($1B valuation).
- Interviewed, on-boarded, and mentored new engineers.
- Documented product perspectives from multiple internal stakeholders to identify areas of incompatible/unclear requirements and foster cross-department collaboration. These documents received routine praise and were held up as examples to follow.
- Implemented Python libraries and microservices for highly-scalable backend processing using Kubernetes, Docker, Kafka, PostgreSQL (SQLAlchemy) and GitLab CI/CD.

Pfizer, Inc. (via The Judge Group) – Remote/Tampa, FL

May 2020 to April 2021
Senior Python Developer

- Designed architecture for highly-scalable, extensible pipeline for data processing within a constrained environment, using just AWS S3, AWS Lambda and Kubernetes.
- Mentored other developers as we built the pipeline and deployed it through to Production.
- Guided new scrum team into better agile practices, while maintaining SDLC process quality.
- Supported existing pipeline deployments.
- On-boarded new pipeline projects and developers around the globe (Europe to East Asia).
- Interfaced regularly with stakeholders in medicine, business, security, and management.

SAP NS2 (via Insight Global) – Remote/Arlington, VA

Apr 2019 to May 2020
Automation Engineer

- Automated user provisioning to multiple systems using Python in Docker.
- Built and improved CICD pipelines using Docker, docker-compose, bash and Python.
- Hardened user-data bootstrap process for AWS EC2.
- Documented and clarified architecture and requirements.

ExecVision, Inc. - Remote/Arlington, VA

Mar 2019 to Apr 2019
Senior Software Engineer, Data Engineering

- Crafted custom Python scripts to upload sample data for machine learning reprocessing.

Rackspace (via NJTech Staffing) – Remote/Tampa FL

Dec 2018 to Feb 2019
Python Developer

- Updated Python dependencies to latest libraries, resolving outstanding known security flaws and bugs in older versions.
- Debugged SAML 2.0 integration issues during local Portal testing.
- Built Docker-based (unit, functional, integration and smoke) tests for local Portal development (using Python).
- Enhanced the Motor project (REST API into kubernetes Tiller) with NewRelic Monitoring using Go (golang) agent.
- Enhanced Portal with HTTP `Via` header (in Lua OpenResty extensions to nginx), so proxied services can respond appropriately across staging and production environments.
- Deployed updated Motor with new Secrets to OpenShift cluster using Helm Charts.
- Assisted other teams with questions about OpenShift, Helm Charts, s2i and Docker-based builds.

Soltra (Soltra Solutions LLC, then bought by NC4) – Remote/Tampa, FL

June 2015 to November 2018
Soltra Engineer

- Turned User Interface mockups into working clickable front-end code, including charts.
- Built extensible ETL framework to import widely-varying data (CSV, JSON, RSS, XML, etc.) into STIX/CybOX (in Python/Django).
- Converted team from npm to yarn to increase development team happiness.
- Proposed and demonstrated potential code and standard enhancements to the open-source STIX/CybOX standards bodies (governed by OASIS).
- Integrated Big Data backends to handle millions of records.
- Crafted custom MongoDB code to correct data issues for clients.
- Collected and streamlined on-boarding and internal process documentation.
- Built pluggable Python/Django apps to extend core application functionality.
- Worked closely with CEO and Product Team to refine product feature requirements.

Stratus Video, Inc. - Hybrid/Clearwater, FL

Feb 2015 to Jun 2015
Principal Engineer

- Reduced Python style (PEP-8) violations from 40,000+ down to zero by aggressively beautifying code with reporting via Jenkins.
- Aggressively authored Python, JavaScript and browser unit tests for back- and front-end code and integration (PyUnit, QUnit, Selenium).
- Transformed legacy monolithic code into tight modules for maintainability.

Cigna Health and Life Insurance Company (via S3 Staffing) – Remote/Detroit, MI

Sep 2013 to Feb 2015
Senior Development Team Lead and Web Application Architect

- Implemented bug fixes and new features in MyCigna Python/Django application.
- Implemented a Python Package Index on Nexus Artifact store to streamline development.
- Lead daily stand-up scrum meetings for a distributed team.
- Standardized deployment process.
- Triaged critical issues on Production servers, when needed.
- Deployed and maintained internal cloud application servers for various stages of testing.
- Copiously documented the platform, on-boarding documents and the future roadmap.

Canonical, Ltd. - Remote/London, England

Jan 2011 to Dec 2013
Software Developer and Subject-Matter Expert on SAML 2.0 Security Integration (contract)

- Built secure Python/Django Identity Provider to connect Ubuntu users to SalesForce.com and Google Apps.
- They hired me as a SAML 2.0 expert based on my open-source library: https://github.com/guitarmanvt/django-saml2-idp

Horizon Investments, LLC (via Anderson Innovative, LLC) – Charlotte, NC

Jan 2011 to Jun 2013

Web Application Developer

- Employed and trained a Python/Django developer to service this client.
- Mentored junior developer in RML-based PDF report creation with Python/Django.
- Built custom ETL tools in Python/Django to import/export account and transaction data to/from multiple financial sources.

Discovery, Inc. (through Centrics Staffing) – Remote/Rochester, NY

Sep 2012 to Feb 2013
Web Application Developer

- Migrated PHP websites to more-efficient Python/Django platform and polished look-and-feel.

Great Commission Ministries (now Reliant) – Remote/Orlando, FL

Jul 2012 to Sep 2012
Web Application Developer (contractual)

- Mentored another contractor during a development contract.

SIL International – Remote/Orlando, FL

Python Developer, Systems Architect, and Integrator

- Coordinated significant changes to the corporate Software Development Life Cycle (SDLC) with other departments.
- Lead scrum team in several Python/Django projects.

R. L. Laughlin & Company, Inc. - Crosslanes, WV

- Full-stack, Web, Desktop, and Database Developer
- Also, programmed RS-232 serial communications link between PCs and specialized machinery.

SELECTED SKILLS

- Azure OpenAI LLM
- AWS Bedrock LLM
- Azure AI Search
- AWS OpenSearch
- PostgreSQL pgvector
- LangChain
- API Development (7+ years)
- Agile Development Methodology (10+ years)
- Algorithm Programming (10+ years)
- Amazon Web Services (4 years)
- Analysis of Business Problems and Solution Discovery (10+ years)
- Automation of business processes (10+ years)
- Boto3 Python Integration for Amazon Web Services
- Business Process Analysis, Documentation and Implementation (10+ years)
- Celery Distributed Task Queue (2 years)
- Code Coverage (5 years)

- Computer and Network Security (10+ years)
- Continuous Integration, Code Quality and Test-Driven Development (TDD) (7 years)
- CybOX Information Security Standard (2 years)
- Cyber Threat Intelligence (2 years)
- Databases and Protocols (10+ years)
- DevOps (10+ years)
- Django REST Framework (2 years)
- Django Web Framework (10+ years)
- Docker and docker-compose
- Full-stack Web Developer
- git/GitHub/GitLab, hosting, Issues and Pull Requests (10+ years)
- GitHub Actions Workflows
- Jenkins BlueOcean Pipelines (1 year)
- Jenkins Continuous Integration Server Configuration and Management (6 years)
- Kubernetes (3 years) *there's a lot under this heading
- Mentoring (10+ years)
- NewRelic Application Monitoring (1 year)
- OpenShift Origin and OKD (2 years)
- PEP-8 code style (6 years)
- Peer Code Review (10+ years)
- Python Unit Testing
- Python programming language (10+ years)
- Retrieval-Augmented Generation (RAG)
- RAG Assessment (RAGAS)
- REST APIs (7 years)
- SAML 2.0 (2 years)
- SSH secure shell usage and administration (7 years)
- Scrum Agile Development Methodology (10+ years)
- Selenium browser-based testing and headless automated testing (3 years)
- Software Architecture (10+ years)
- Software Development Life Cycle (10+ years)
- Software Framework Architecture and Implementation (10+ years)
- Team Leadership (10+ years)
- Technical Documentation Authoring (10+ years)
- Test-Driven Development (6 years)
- bash scripting (8 years)
- flake8, pylint, and pyflakes static Python checking (6 years)

EDUCATION

Bachelor of Science in Computer Engineering
Virginia Polytechnic Institute & State University (Virginia Tech)
Blacksburg, Virginia