

ALAN VERDUGO

Software engineer

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COMPETENCES

Programming	Python, FastAPI, Shell scripting, JavaScript, NodeJS, PowerBuilder
Data analysis	Pandas, Matplotlib, Jupyter notebooks, Google Analytics
Databases	MySQL, DB2, PostgreSQL, MongoDB
Security	WhiteSource, Hashicorp Vault, AppScan on Cloud
Operating systems	GNU/Linux (Redhat, Centos, Debian, Ubuntu Server), AIX
Others	Docker, Git, Travis CI, OpenShift, Markdown, \LaTeX , Cron, Jira, Hadoop, Agile methodologies

PROFESSIONAL EXPERIENCE

November 2018
Present

Software engineer, IBM

- Designed, developed, tested and documented code for the migration of monolithic ETL processes into a continuously integrated DevSecOps pipeline based on RedHat's OpenShift.
- Implemented and improved coding standards' compliance, including PEP8, test coverage, security assessments and code complexity analysis.
- Designed and implemented the secrets-sharing strategy of all our applications with Hashicorp Vault.
- By implementing CI/CD tools, I incremented the development team's throughput while reducing the error rates and migrating from an IaaS architecture to a cloud and container-based architecture.
- Designed and implemented our monitoring strategy of all our applications with the use of New Relic.
- Our successful code builds required full PEP-8 compliance, unit test coverage (> 80%), and cyclomatic complexity validations, all this while adhering to IBM's strict security standards.
- Presented local and company-wide training sessions in topics like automation, monitoring, security, containers, documentation and development best practices.
- Member of IBM's core Python team in Mexico, designing and presenting courses, conferences and hackatons.
- Co-authored two IBM Redbooks (refer to the publications section).

Python OpenShift FastAPI GitHub Docker Pandas Travis CI Hashicorp Vault DB2 PostgreSQL RHEL
Xenon Bandit New Relic LogDNA

June 2018
November 2018

Software engineering team lead, AMDOCS

- Led and mentored a development team across multiple geographies.
- Processed, analyzed and reported the data of a major telecommunications company.

Python Spark SQL ETL Cassandra Qlikview

June 2014
June 2018

Software engineer, IBM

- Collected, processed, curated and reported all of the billing data for IBM's AppOps Team. By enhancing existing code and developing new programs, I automated the processes and increased the revenue of the team in thousands of dollars per month.

Python SQL ETL GitHub IBM Smart Cloud Cost Manager IBM Tivoli Usage and Accounting Manager DB2

April 2013
June 2014

System administrator, IBM

- Supporting, troubleshooting, installing, configuring, migrating and developing all kinds of software and servers. Specialized in the Unix platform and its variants (GNU/Linux, AIX, etc.)

RHEL AIX Websphere Application Server Nagios

September 2012
April 2013

System administrator, ELECTRONIC ARTS

- Launching, supporting, troubleshooting, and enhancing thousands of servers and applications in the cloud, used for videogame traffic and data processing for millions of concurrent users.

Debian Python MySQL Nagios

November 2007
September 2012

Programmer analyst, AUTOZONE

- Troubleshooting, debugging, maintaining, developing and enhancing systems in a wide variety of programming languages and operating systems in a production environment for a Fortune 500 company.
- Received two *WITTDJR* (*What it takes to do the job right*) awards for delivering an excellent customer service and one *Extra Miller* award for "going above and beyond the call of duty, exceeding expectations and consistently doing more than expected."

PowerBuilder SQL C Java Perl Bash Jira MySQL Informix PostgreSQL

CERTIFICATIONS

CompTIA Linux+	Valid from: Sept. 2016 Verification code: DQPR3E9HCDVE1WSN
LPIC-1	Valid: Sept. 2016 - Sept. 2021 LPI ID: LPI000368945 Verification code: pfbbjhavvj
Google Analytics Individual Qualification	Valid: Jan. 2018 - Jul. 2019

COURSEWORK AND TRAINING

Rice University	Interactive programming in Python
MongoDB, Inc.	MongoDB for developers
IBM	Big data foundations
IBM	Watson analytics
University of California at San Diego	Python for data science
Wizeline academy	Portable Stream and Batch Processing with Apache Beam
IBM	Blockchain essentials
IBM	Applied Data Science with Python
Google	Data Engineering on Google Cloud Platform Specialization
IBM	IBM Cloud Kubernetes Service
IBM	DevOps Essentials

PROJECTS

December 2021 June 2022	Endurance mission, IBM <ul style="list-style-type: none">> The Endurance CubeSat mission is about making space accessible to everyone on this planet - In other words, democratizing access to Space. We leveraged IBM / RedHat technology to allow students worldwide to interact directly with a CubeSat in Low Earth Orbit - giving them the ability to use code to access data from various sensors, take pictures, perform calculations, and get the results back down to Earth via ground stations and the IBM Cloud. <div>Python Raspberry Pi 4 IBM Cloud</div>
2020 2021	Gilbert (Educational open source mobile application), INDEPENDENT <ul style="list-style-type: none">> Built a mobile application aimed at helping college students to learn about electricity and magnetism.> Documented and published the entire application as free and open source software. <div>Python Kivy</div>
June 2016 October 2016	Cognitive Concierge, IBM <ul style="list-style-type: none">> Our team trained and configured speech recognition patterns along with questions and answers in order to program a set of humanoid robots who could understand and answer natural language questions about IBM, Watson, cloud technologies, robotics and nearby locations.> A fully-working demo was presented publicly during the <i>World of Watson</i> conference in Las Vegas. <div>SoftBank Robotics' Nao and Pepper humanoid robots Watson Natural-language processing Speech recognition</div>

PUBLICATIONS

Red Hat OpenShift V4.X and IBM Cloud Paks on IBM Power Systems (Volume 2)

<http://www.redbooks.ibm.com/abstracts/sg248486.html?Open>

ISBN-10: 0738459569

ISBN-13: 9780738459561

Implementing and Managing a High-performance Enterprise Infrastructure with Nutanix on IBM Power Systems

<https://www.oreilly.com/library/view/implementing-and-managing/9780738458564/>

ISBN-13: 9780738458564

Desarrollo de una aplicación educativa móvil para el aprendizaje de fundamentos de circuitos eléctricos

<https://tinyurl.com/37t52s7b>

ISSN: 1405-2172