Juan Rael Corrales Arellano
Python Developer | Data Engineer
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Python | AWS | GCP Dataflow | GCP Dataflow | GCP BigQuery | GCP Bigtable | SQL | MySQL | PostgreSQL | MongoDB |
HL7 | ASTM | Flask | Django | Apache Beam | NodeJS | Express | Generative AI

Professional Summary:

Computer Engineer with more than 10 years of experience, specialized in Python and in the implementation of robust technological solutions for data engineering projects, process automation and scalable application development. I have worked on key migration projects, data orchestration and development of serverless solutions in sectors such as technology, retail, health and telecommunications, using platforms such as AWS and GCP.

My experience includes:

- Massive data migrations to BigQuery, improving processing capacity by 60% by optimizing ETL/ELT pipelines with Apache Beam and GCP Dataflow.
- Design and implementation of serverless solutions with AWS Lambda and DynamoDB, allowing real-time processing of critical business data.
- Infrastructure automation with Terraform, Kubernetes and Helm, ensuring scalability and reliability in production environments.
- Development of tools to manage sensitive data in regulated environments, such as health systems, complying with security and privacy regulations.

With a strong track record in training new team members, I have acquired solid leadership and mentoring skills. Additionally, I have led innovative projects that leverage technologies such as Ansible and ReactJS to automate processes and create intuitive user interfaces. My focus is on driving efficiency, scalability, and continuous improvement of business processes.

I am committed to continuous learning, with certifications in data engineering, generative artificial intelligence, and advanced Python development, ensuring the ability to solve complex technological challenges.

Experience:

Assistant Consultant
Tata Consultancy Services
Guadalajara, Jalisco, Mexico | Apr 2022 – Presente

- ***Enterprise Search***
  - *Development of **pipelines** to obtain data from the corporate intranet, using Selenium and requests to APIs.*
  - *Development of pipelines to insert business rules for the different services available by the company, having to read Word, Excel, Power Point, Visio, Images, Audio or Video files, so that this information is available to be consulted in the search engine.*
  - *Development of Datasets from different sources so that the company's artificial intelligence projects can have this information available to be consulted with Natural Language.*

- **Maintenance Scheduler**
  - Development of optimized APIs using Python and AWS Lambda for the generation of the worker agenda using the different levels of business rules required.
  - Development and optimization of APIs using Python, designed to handle robust data and ensure customer interaction.
  - Develop and support pipelines using AWS Lambda and AWS SNS for communication of the different steps of the system allowing robust processes in Serverless environments.

Data Engineer
Coppel S.A. de C.V.
Guadalajara, Jalisco, Mexico | Jul 2020 – Apr 2022

Project Description: Designed and built robust ETL and ELT data pipelines, migrating and scaling large volumes of data from SQL Server and PostgreSQL to GCP BigQuery. By leveraging technologies such as GCP Dataflow and Apache Beam, I was able to optimize data transformation and loading processes by 60%, significantly improving the efficiency and scalability of our systems.

Job Responsibilities:

- Designed and built ETL and ELT pipelines to migrate and scale SQL Server and PostgreSQL data to GCP BigQuery by 60% using GCP Dataflow, Apache Beam, and Apache Airflow.
- Implemented CI/CD pipelines with Kubernetes and Helm for rapid and continuous deployment.
- Empowered the sales team with data visualization tools and custom datasets to gain deeper insight into retail customer segmentation.
- Partnered with Data Science to deliver high-quality, timely data for their analyses.
- Stayed ahead of the curve by continuously evaluating and adopting new cloud technologies.
- Leveraged Terraform to create scalable and reusable cloud infrastructure.

Senior Web Developer
Carbono Marketing
Puerto Vallarta, Jalisco, Mexico | Jul 2020 – Apr 2022

Project Description: Developing custom web applications tailored to the hospitality and restaurant industry. We optimize business performance by integrating various APIs and customizing solutions to meet each client's unique needs. We utilize a robust technology stack, including PHP, Python, and JavaScript.

Job Responsibilities:

- Development of custom systems for various team projects.
- Supporting the team in managing team servers, keeping them updated and optimized.
- Supported collaboration between teams through the integration of API solutions aligned with development and marketing strategies, improving the performance of the digital platform.

Python Developer
Alliance IT LLC.
Pleasanton, CA, USA | Aug 2019 - Mar 2020

Job Responsibilities:

- Building a serverless application using AWS Lambda and DynamoDB to deliver real-time solutions for critical business data.

- Developing real-time data pipelines to ensure data accessibility across the organization.
- Implementing Python-based microservices for modular functionality, enabling rapid updates and maintenance.

NFV Automatization Engineer

Equinix
Sunnyvale, California, USA | May 2019 - Aug 2019

Project Description: Developing the automatization of the devices to create infrastructure for its clients. Using CISCO and JUNIPER as Network devices and connecting it around the globe.

Job Responsibilities:

- Created, optimized, and maintained configuration templates for each device.
- Experience in developing scripts using Python and Jinja2.
- Experience in developing Ansible scripts to automate device configuration.
- Worked with object-oriented programming (OOP) concepts using Python and Linux.
- Experience using various version control systems such as GitLab.
- Created and executed a suite of non-interactive tests as batch tests, using Python's Mock to simulate Google Cloud Platform functionalities.
- Experience with various IDEs such as Sublime Text, JetBrains PyCharm, and VS Code.

Python Engineer

Qlogic Software Solutions
Greater New York City Area | Oct 2018 - May 2019

Project Description: Developed Python-based connectors for Google Cloud Platform Dataflow to enable developers to utilize Dataflow and Bigtable effectively. Created sample applications and guides for Google Cloud Platform Bigtable to facilitate its usage by clients in PHP and Python.

Job Responsibilities:

- Developed and optimized Dataflow pipelines for real-time data processing, utilizing Apache Beam connectors and StackDriver for monitoring.
- Built scalable and resilient data processing solutions using Google Cloud Platform services.
- Proficient in using GRPC for efficient communication with Google APIs.
- Implemented object-oriented design patterns in Python to create maintainable and scalable codebases.
- Streamlined development workflows using JIRA for issue tracking and Git for version control.
- Experienced in using a variety of IDEs to improve development efficiency.

Senior Python / UI Developer

Sistemas y Aplicaciones para Servicios de Salud
Puerto Vallarta, Jalisco, Mexico | Jul 2017 - Jul 2018

Project Description: Developed a custom Laboratory Management System using PHP, HTML, CSS, and JavaScript to streamline daily operations of a mid-sized clinical laboratory. I was responsible for backend architecture, database design, and frontend implementation. I successfully reduced order processing time by 30% by optimizing search algorithms and improving database query efficiency. Additionally, I implemented an intuitive interface to facilitate system usage by laboratory staff.

Job Responsibilities:

- Successfully developed and optimized a Laboratory Management System to improve efficiency and streamline workflows.
- Collaborated with clients to create tailored workflows that meet their specific needs and regulatory requirements.
- Ensured data security and compliance by conducting thorough workflow analyses and implementing robust security measures.
- Partnered with medical equipment vendors to integrate seamlessly with their products and deliver a user-friendly experience.
- Deployed scalable and reliable applications on AWS to support healthcare operations.

Education:

Computer Science Engineering | Technological Institute of Puerto Vallarta | 2006 – 2012

Courses & Certifications:

- Data Engineer Associate | DataCamp | Nov 2024

- Intermediate Python | DataCamp | Oct 2024

- Django for Everybody Specialization| University of Michigan | Aug 2024

- Recommender Systems Specialization | University of Minnesota | Aug 2024

- Generative AI Essentials for Software Developers | Coursera | Jul 2024

- IBM AI Developer Specialization | IBM | Jul 2024

- Generative AI with Large Language Models | DeepLearning.AI | Feb 2024

- Web Scraping In Python: Master The Fundamentals | Udemy | Jul 2024

- M201: MongoDB Performance | MongoDB University | Aug 2013

- M101P: MongoDB for Developers | MongoDB University | Aug 2013