

EXPERIENCE

Lead Data Engineer

Thoughtworks

Nov 2023 - Present

American Pharmaceutical & Biotechnology Company

- Advised and assisted the client in adopting a Data Mesh architecture for its manufacturing business

Founding Data Engineer

Nextdata Technologies

Aug 2023 - Nov 2023

Field Engineering

- Worked with design partners and early adopters to implement POC's of data products using the first prototype of Nextdata OS.

Senior Data Engineer

Thoughtworks

Feb 2018 - Aug 2023

British Pharmaceutical & Biotechnology Company

- Advised and assisted the client in adopting Data Mesh architecture for its R&D business
- Implemented data products for the R&D Clinical Trials domain on **Azure** using **Databricks** and **Airflow**
- Engaged with other organizations and third-party vendors to address path-to-production problems and drove efforts to successful resolutions.
- Introduced unit/integration testing and continuous delivery practices for data products adopted by client teams

Financial Services Company

- Facilitated a 4-week workshop on adopting data mesh within their organization
- Delivered a working proof-of-concept of a Data Marketplace that the client used to socialize the data mesh to other organizations. Implemented the prototype using **DataHub** on **AWS**.

Software Venture Capital Firm

- Enabled the client to expand their 100+ product portfolio by coaching and adopting agile software delivery practices such as the testing pyramid, infrastructure as code, testing automation, continuous delivery, peer code reviews, telemetry, and the 4 key metrics of DevOps

Electric Grid Operator

- Responsible for migrating a public-facing data warehouse from their on-prem infrastructure to **AWS**
- Migrated ETL pipelines from proprietary technology at their end-of-life to open-source tools such as **Kafka**, **Spark**, **Argo**, **PostgreSQL**, and **Kubernetes**
- Enabled the client to move away from a waterfall life-cycle to an agile software development culture

Major e-Commerce Company

- Implemented "Right-to-Be-Forgotten" in compliance with GDPR

Systems/Software Engineer V

Hewlett-Packard Enterprise

Jan 2011 - Feb 2018

Server Diagnostics Development

- Implemented C/C++ server diagnostics and system load tools
- Reduced memory test time by writing a Linux kernel module that executes tests in kernel space
- Analyzed manufacturing data to identify improvement areas using Lean Six Sigma methodologies

Factory Process Automation

- Implemented the full stack of a **C#** web app & API that diagnoses server hardware and automates processes in manufacturing lines worldwide
 - Reduced the time to detect assembly defects from 30 minutes to 1-2 minutes
 - Served a Tech Lead of a group of 5 SW Engineers
 - Gathered requirements from customers in Europe, America and Asia
 - Managed a bi-weekly release cycle
- Implemented manufacturing data visualizations using Angular, D3.js and plotly.js
- Developed a prototype for a data collection and analysis pipeline using **Spark**
- Implemented an assembly test time predictor using Neural Networks in **Tensorflow**

LANGUAGES AND TECHNOLOGIES

- Java, Scala, R, Python, SQL
- AWS, Azure, Spark, Databricks, PyMC, Tensorflow, Airflow, Tableau
- Machine Learning Algorithms, Bayesian analysis

EDUCATIONAL / PERSONAL PROJECTS

Twitter Geolocation Predictor (2017) - <https://github.com/jmatias/uiuc-twitter-geolocation>

- A tool that predicts the geographical location of a Twitter user by analyzing the text content of the user's tweets

Machine Learning Prototypes (2016-2017) – <https://goo.gl/B5a1HY>

- A Neural Network estimator to predict house prices using Tensorflow
- A CNN image classifier hosted in an Angular web app

Practice Your Vote (2012 - 2020) – <https://goo.gl/tYsEsf>

- An interactive Java Web App aimed to educate voters by allowing them to practice casting ballots online

EDUCATION

B.S. in Computer Engineering

University of Puerto Rico at Mayagüez

2011