

LUIS BARRAGAN

Systems Engineer

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WHO AM I?

M.Sc. Student in Computer Science at The University of Freiburg specializing in Artificial Intelligence. B.Sc. in Systems Engineering with 5+ years of software development experience. Proficiency in **Python, PHP, and Javascript**. Experience with back-end frameworks (**Flask, Django, Laravel, Lumen**) and front-end technologies (**Vue.js, HTML, CSS, Javascript**). Experience in RESTful APIs, OpenAPI, Swagger, Docker, Webhooks, Unit Testing, SQL, NoSQL, Celery, Redis, Web Sockets, and Selenium. Experience with AWS services, Git, Numpy, Pandas, and Dash. Developed features and applications end-to-end from conception to deployment. Strong analytical and communication skills. Proficiency in written and spoken English (CEFR C1).

EXPERIENCE

6/2022 – 9/2023
Full time – Remote

Senior Full Stack Engineer

Project Waste Not Inc.

- Developed core features, API integrations with 3rd party services, and several ETL pipelines using Python, Flask, and Django.
- Identified and solved performance bottlenecks using profiling tools such as Django Silk.
- Ensured high availability of the AWS infrastructure for core services.
- Wrote SDD documents for new features and updated the documentation for existing features in Notion.
- Conducted production deployments and code reviews.

Django / Flask / Python / Pandas / MySQL / Celery / AWS / Vue.js

2/2021 – 5/2022
Full time – Remote

Senior Software Development Engineer

Heinsohn

- Built a messaging service from scratch to support one-to-one and one-to-many real-time communication between the users of CareTree using PHP, Lumen, Laravel, and Vue.js.
- Took the initiative to standardize the messaging service API according to the JSON:API Specification to help mitigate the bikeshedding problem.
- Designed and developed a responsive UI for the messaging service using Vue.js, Vuex, Firebase Cloud Messaging, and Firebase Realtime Database.
- Guided new development team members by conducting code reviews and project onboardings.

PHP / Laravel / Lumen / Vue.js / Vuex / jQuery / MariaDB / Firebase

2/2020 – 1/2021
Full time – Remote

Software Development Engineer

Heinsohn

- Engineered new features for a healthcare management software product: CareTree such as emergency access, automated workflows, and outgoing webhooks.
- Led the development and expansion of a RESTful API for mobile platforms.
- Participated in business and technical weekly meetings with the developer team, project manager, and client to ensure project milestones were met on schedule.
- Resolved software bugs and performance issues using debugging and profiling tools such as Laravel Debugbar.

PHP / Laravel / jQuery / MariaDB / Selenium

6/2019 – 8/2019
Full time – On-site

Software Developer

Rambal S.A.S

- Remodeled the quality control software (RambalQC) UI by replacing jQuery and Vanilla JS with Vue.js enhancing the user experience.
- Implemented a fully customizable Role-Based Access Control method for RambalQC allowing the admins to define granular access permissions based on organizational hierarchy.
- Identified and optimized database queries resulting in a reduction in response times.
- Developed new features for RambalQC to support quality control metrics such as forms, plots, and reports.
- Conducted hands-on mentoring sessions covering Laravel fundamentals, MVC architecture, and best practices, reducing dependency on external contractors.

PHP / Laravel / Vue.js / Vuex / Vue Router / MSSQL

1/2018 – 5/2019
Freelance – Hybrid

Software Developer

Rambal S.A.S

- Collaborated in developing a web application for tracking quality metrics about the manufacturing processes of the company.

PHP / Laravel / jQuery / MSSQL

2/2016 – 8/2017
Full time – On-site

Systems Engineer

Cootransmagdalena Ltda.

- Developed a web-based application for efficient fleet maintenance management, aligning with the specifications outlined in Colombia's National Strategic Road Safety Plan.
- Coordinated the integrations and migration of data from outdated accounting software to a modern and robust system, ensuring data integrity and security.
- Maintained and optimized the On-premise IT infrastructure by implementing load-balancing, preventive and corrective maintenance, ensuring high availability and continuity of operations.
- Took initiative to identify and eliminate unnecessary costs, resulting in significant cost savings for the organization.

PHP / Laravel / jQuery

EDUCATION

2023 – Present

Master's Degree, Computer Science

The University of Freiburg

Artificial Intelligence specialization track

Pytorch / Python

2014 – 2019

Summa cum laude

Bachelor's Degree, System Engineering

Unidades Tecnológicas de Santander

Hybridization of a genetic algorithm with a local search method for the university course timetabling problem.

Python / Django Framework / Numpy / Celery / Node.js / Redis / Socket.IO

2014 – 2016

Cum laude

Associate's Degree, IT Systems Development

Unidades Tecnológicas de Santander

Analysis, design, and development of a CMMS for the Cootransmagdalena Ltda. fleet of vehicles.

PHP / Laravel Framework / jQuery / PostgreSQL

CERTIFICATIONS

7/2022

Honors Certificate

Data Science for All

Correlation One

- Learned core foundations in Data Science and skills such as data cleaning, exploratory data analysis, feature engineering, data modeling, and data visualizations.
- Led a team of four (4) people to design and develop a data science project to overview the crime situation in the municipality of Jamundi, Valle del Cauca, as well as support the authorities and citizens in their decision-making.
- Deployed a Dash application in the AWS Cloud using RDS and EC2.
- Awarded as the best project and the most acclaimed by the public in the corresponding TA pair group.

Dash / Plotly / EC2 / RDS / PostgreSQL / Geopandas / Pandas / Flask

12/2021

Exam

AWS Certified Cloud Practitioner (CCP)

AWS

• Gained knowledge of core AWS services and a basic understanding of the use cases for the AWS Cloud platform.

10/2021

Course

AWS Machine Learning Foundations

Udacity

- Identified the different services offered by AWS for Machine Learning and their use cases.
- Learned Software Engineering practices such as writing clean, modular, and efficient code, as well as adding meaningful documentation.

AWS / Python

9/2020

Nanodegree

Intel Edge AI for IoT Developers

Udacity

- Learned foundations in computer vision models, model analysis, performance analysis, and use cases using OpenVINO.
- Developed a people counter application to be used at the Edge.
- Designed a smart queuing system for various hardware types (CPU, VPU, FPGA, GPU)
- Gained skills in model optimization to improve inference time at the Edge.
- Created a Deep Learning pipeline for a computer pointer controller application by using multiple models for face detection, head pose estimation, and gaze estimation.

OpenVINO / Python / Linux / OpenCV / MQTT

LANGUAGES

Spanish - Native
English - Proficient (C1)

INTERESTS

Software Engineering, Cloud Computing, Data Science, Machine Learning, Computer Vision, Optimization, Internet of Things.

TRAITS

Autodidact, cooperative, communicative, confident, and self-motivated.