Yordin Herrera Borge

Data Science Engineering Student | Data Engineering | ETL | PostgreSQL | Applied ML

Naranjo, Costa Rica | +506 6258-1978 | borge.yordin@icloud.com | Portfolio | LinkedIn

PROFESSIONAL SUMMARY

Data Science Engineering student specializing in data pipeline development, relational modeling, and applied machine learning integration. Experienced in building full-stack analytical systems with secure APIs, PostgreSQL databases, and cloud deployment workflows. Focused on transforming raw data into scalable, production-ready solutions that support business intelligence and decision-making.

TECHNICAL SKILLS

PROGRAMMING & DATA ENGINEERING

Python, Pandas, NumPy, ETL Development, Data Validation, Structured Logging

BACKEND DEVELOPMENT

Flask, REST APIs, Modular Architecture, API Integration

DATABASES

PostgreSQL (queries, joins, aggregations), SQL Optimization, Relational Modeling

FRONTEND & VISUALIZATION

React (project-based), Streamlit, TypeScript (basic), Tailwind CSS

CLOUD & DEVOPS

Docker (containerization), Render (backend & API deployment), Railway (cloud deployment), Neon (PostgreSQL cloud database), Git & GitHub (version control workflows)

MACHINE LEARNING INTEGRATION

ONNX Runtime, MediaPipe, OpenCV, Data Preprocessing Pipelines

PROFESSIONAL EXPERIENCE

IT SUPPORT TECHNICIAN

Librería Cristal | Full Time

- Delivered Tier 1 and Tier 2 technical support for computer systems and peripheral devices across multiple workstations.
- Reduced equipment downtime through preventive and corrective maintenance of desktops, laptops, and printing systems.
- Managed and monitored storage devices and hardware infrastructure to ensure operational continuity.
- Installed and configured network infrastructure including routers, switches, Ethernet cabling, and network printers.
- Supported server configurations and network segmentation using IP addressing best practices.
- Documented technical procedures and troubleshooting workflows to improve internal operational efficiency.

PROJECT EXPERIENCE

FACTURAIQ – INTELLIGENT BILLING ANALYTICS DASHBOARD (FULL-STACK)

Technologies: React, TypeScript, Vite, TailwindCSS, Node.js, Express, PostgreSQL (Neon), JWT, bcrypt, Railway/Render, GitHub Actions

- Built a full-stack billing analytics platform that transforms uploaded CSV files into interactive dashboards, KPI cards, and automated reports.
- Implemented **secure authentication** with **user registration, login validation, JWT sessions, and protected routes**, with role-ready structure for future scaling.
- Developed a Node/Express REST API connected to **PostgreSQL on Neon**, using environment variables and production-ready security libraries (e.g., bcrypt/JWT stack).
- Implemented dynamic CSV upload + automatic column detection and **data normalization** to handle inconsistent input schemas.
- Delivered a modular frontend architecture (Auth pages, ProtectedRoute, Dashboard, Upload, DataContext) to keep UI logic maintainable and scalable.

BACKGROUND REMOVER – FULL-STACK & LOCAL ML APPLICATION

Technologies: React, TypeScript, TailwindCSS, Node.js, Express, Python, Streamlit, ONNX Runtime, rembg, Docker, REST API

- Developed a full-stack computer vision web application for automated image background removal using a pre-trained ONNX segmentation model.
- Designed a RESTful backend API to handle image upload, validation, preprocessing, ML inference execution, and output generation.
- Implemented a modular inference pipeline separating validation, preprocessing, model execution, and post-processing layers to improve maintainability.
- Built a responsive React frontend with real-time image preview and secure file download functionality.
- Containerized backend services using Docker to enable portable and scalable cloud deployment.

Local ML Deployment (Streamlit Version)

- Built a standalone Streamlit-based local application enabling interactive background removal with real-time preview and download support.
- Implemented dependency validation (onnxruntime detection) and structured exception handling to improve application robustness.
- Designed user-friendly UI workflow including file type validation, loading states, and guided troubleshooting instructions.
- Optimized image handling using in-memory processing to reduce latency during inference execution.

HAND-GESTURE DETECTION

Technologies: Python, OpenCV, MediaPipe, NumPy

- Implemented real-time hand detection using computer vision techniques with MediaPipe and OpenCV.
- Processed video frames efficiently to detect hand landmarks and track gestures dynamically.
- Designed a structured processing pipeline separating frame capture, landmark detection, and visualization.
- Optimized numerical operations using NumPy for real-time performance.

CRC TO USD CONVERTER

Technologies: Python, Flask, REST API, Render, HTML, CSS, JavaScript

- Developed a RESTful API using Flask to fetch real-time USD–CRC exchange rates from an external API service.
- Deployed the backend on Render with environment-based configuration for secure production usage.

- Implemented error handling for API failures and invalid responses to ensure system reliability.
- Integrated frontend and backend layers to deliver a responsive user interface via GitHub Pages.

Note: All project demos were implemented with a React frontend using TailwindCSS, integrated with backend APIs, data pipelines, or ML inference workflows depending on the project architecture.

EDUCATION

Bachelor's Degree in Data Science Engineering
LEAD University | Expected Graduation: 2027

Technical Degree in Software Development
CTP Francisco J. Orlich Professional | 2017–2022

CERTIFICATIONS

- **DataCamp:** Python Data Analyst, SQL for Data Analysis
- **Cisco:** Introduction to Python
- **INA:** Software Quality Controller, Intermediate English, Spreadsheet Creation

LANGUAGES

Spanish: Native

English: Professional Working Proficiency (B1)