

HENRY MELEN

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As an experienced IT professional, I possess a deep understanding of technological systems and a proven record of implementing effective solutions. My expertise extends to managing and optimizing IT infrastructure, including servers, databases, and cloud-based systems. I have a strong command of programming languages such as Python, C, Typescript, and MATLAB. My expertise extends to the object-oriented programming paradigm, equipping me with the versatility to navigate a wide array of languages and tools effectively.

SKILLS

- Django + DRF
- React
- Docker
- Linux Operational Systems
- MATLAB
- Solidworks
- ESP-IDF
- Jupiter Lab/ Spyder
- Python Scientific Libraries

EDUCATION

Degree in Control and Automation Engineering at Universidade Salvador - UNIFACS | 2016.
Specialization in Automation, Control and Robotics at SENAI/CIMATEC. | 2018.
Master's degree in computational Modeling in Science and Technology at UESC | 2022.

EXPERIENCE

Academic

- I have completed several projects where I built physical dynamic systems from scratch and controlled them using microcontrollers. The most relevant ones include a mini robotic manipulator with four degrees of freedom and an inverted pendulum mounted on a linear car. Before constructing these systems, I utilized a MATLAB and Solidworks integration to model and simulate them.
- For the master's degree final project, I created a model that aggregates data from three diverse sources. I created grouping and linearization technics to merge the data accordingly, I pre-processed it and built a classification model to be evaluate with various machine learning techniques.

Professional

Daten Tecnologia Ltda

Aug 2019 - Oct 2019 · 3 mos.

<https://www.daten.com.br>

- I briefly served as an IT technician in the industry at Daten.
- Skill Set:
 - Installing, updating, and configuring software applications.
 - Setting up and managing Linux virtual machines.
 - Troubleshooting network problems and connectivity issues

Positivo Servers & Solutions (PSS)

Oct 2019 - Dec 2021 · 2 yrs. 3 mos.

<https://www.positivoservers.com.br>

- I worked for PSS, a highly regarded company in Brazil. During my tenure, we were responsible for the creation of 'Dragão,' the largest supercomputer in Latin America.
- As a programmer and product analyst at PSS:
 - Managed hypervisors and virtual machines,
 - Developed python microservices for operational and business purposes.
 - Sizing and testing Hardware for Computers and Servers
- As a project assessor, I facilitated collaboration between PSS and Senai/Cimatec in a major IoT project called PDMA (Plataforma Digital de Manufatura Avançada). Our goal was to create a platform of hardware, software, and communication that meets the needs of the 4.0 Industry ecosystem.
- Skill Set:
 - Expertise in Python programming, with a strong command of the Pandas library for activities like cleaning and preprocessing of raw data collected from sensors, equipment, and production processes.
 - Experience in handling SQL Databases, managing and constructing precise queries through stored procedures.
 - Using libraries like Matplotlib and Seaborn to create informative charts and graphs to visualize data patterns and trends.
 - Creating ETL Python microservices for data collection and processing.
 - Skilled in utilizing the Django Rest framework to develop robust RESTful APIs.
 - Expertise in packaging applications and their dependencies in lightweight, portable containers.
 - Core Engineering skills (GitHub, automated testing, Docker containerization.)
 - Training, evaluating, and fine-tuning machine learning models with the Sci-Kit library.
 - Managing Local virtual machines. Monitoring the hyper v hypervisor with the Telegraf agent as metric collector.

Freelancer

VIRTUS - CEEI/UFCG

May 2022 - Aug 2022 · 4 mos.

<https://www.virtus.ufcg.edu.br>

- VIRTUS is an auxiliary body of the Federal University of Campina Grande (UFCG), affiliated with the Center for Electrical Engineering and Informatics (CEEI). I freelanced for it, consulting on the development of the new PSS Product Configurator.
- Skill Set:
 - Idealized a new model component that accepts a mathematical formula and its variables as a parameter. The equation obtained represents the complete process of pricing a hardware component. This model improved the system, eliminating obstacles present in the previous version. It enhanced the system's flexibility, allowing for the registration of any product and streamlining the overall process.
 - Advised on the re-architecting of the system to implement the changes accordingly.
 - Provided pieces of JavaScript code for inserting and filtering of supplies. Offered analytical insights on how to optimize the product model.
 - Provided documentation about the new pricing methodology and its overall implications.



SELF-STUDY KNOWLEDGE

- I am committed to continuous learning and self-improvement, constantly developing experiments to stay updated with the best technologies and their advancements. I can make ETL pipelines, Web Scrappers, Data Collectors, API, Brokers, and many more other services depending on the specific requirements and use cases.
- I have conducted experiments in creating visually appealing and responsive Single Page Applications using React.
- I have developed an IoT platform using ESP32 modules, which integrated the InfluxDB database and Grafana for real-time data visualization, using temperature and electric current sensors and deploying on a virtual machine on Amazon AWS.



INFORMATION

Have dual citizenship: Brazilian and Belgian.

Speak Portuguese and English.