Pablo Setrakian Bearzotti

+34 633 431 370 | psetraki@alumnos.unex.es | linkedin.com/in/kyantti | github.com/kyantti

EDUCATION

University of Extremadura   Mérida, Spain
Bachelor of Computer Engineering and Information Technology   *Sep. 2021 – May 2025*

EXPERIENCE

Research Assistant Intern   Nov 2024 – Present
Grupo de Evolución Artifical - University of Extremadura   *Mérida, Spain*
- I focus on developing artificial intelligence solutions for detecting mycotoxins in fresh figs.

PROJECTS

Below are some of my top projects from past semesters:

Class Scheduler | *Java*   Oct 2023 - Dec 2023
* Developed an application that solves the combinatorial optimization problem for the automatic generation of class schedules in an educational center.
* The application generates a valid schedule for Y years; each with S subjects, each subject having H hours, distributed across C classrooms, over D days, with P periods per day; taking into account the time between classes of the same year and prioritizing the morning hours.
* Implemented a genetic algorithm (GA) incorporating various types of selection and replacement strategies, mutation and crossover operators.
* Implemented Model View Controller (MVC) pattern and used Java FX for the graphical user interface.

Travel Agency Management System | *Java, MongoDb, Cassandra*   Oct 2023 – Nov 2023
* Designed and implemented a travel agency management system using a NoSQL database, both with the Cassandra model and the MongoDB model.
* The system is capable of efficiently performing basic, advanced, and complex queries, which involves generating indexes or tables with different indexings.
* Implemented the Data Access Object (DAO) pattern.
* Built a battery of JUnit4 tests to compare the output of queries across both Cassandra and MongoDB databases.

Sales Analysis with Map-Reduce | *Java, Hadoop, Shell*   Dec 2023 - Dec 2023
* Developed a Java Map-Reduce application to analyze monthly sales data for a company, leveraging Hadoop Distributed File System (HDFS).
* Addressed queries regarding total sales per year, best sales month and city, optimal advertising time, and top-selling product.
* Implemented on a Hadoop cluster, leveraging the Map-Reduce paradigm for parallel data processing.
* Implemented a bash script for executing the Hadoop job on the cluster and automating the process of answering sales-related queries.

Spam Detector | *Shell*   Oct 2023 - Nov 2023
* Developed an Shell script that analyzes the text coming from a set of emails and tries to provide information on whether the email is potentially dangerous and can be classified as spam.
* Used a set of 12.000 emails and 200 fraudulent expressions stored in text files.
* An E-mail is considered spam based on TF-IDF

Apache Cluster Creation Automation in Proxmox | *Shell*   Mar 2024 - Mar 2024
* Created a set of Shell scripts designed to automate the creation of N containers on Proxmox VE and the setup of an Apache Spark cluster with N nodes.
* One script looks for N available contiguous IP addresses downstream and assigns each IP to a container, matching the container ID with the host part of the IP address.
* The other script automates the process of creating an Apache Spark cluster. It installs Apache Spark on each node and initializes the node with the highest ID as the master and the rest as workers.

Hierarchical Process Management | *C*   Dec 2023 - Dec 2023
* Developed an application to find the number of prime numbers in a matrix of 15 rows by 1000 columns by implementing process communication using pipes and shared memory in UNIX.
* Utilized text files to store information about process steps and prime numbers found for analysis.

Technical Skills

Programming Languages: Java, C/C++, JavaScript, Python, Common Lisp
Technologies and Frameworks: Hadoop, Apache Spark, Knime, MSSQL, MySQL, Cassandra, MongoDB, HTML/CSS, Junit, Spring
Developer Tools: Git, Docker, VS Code, Visual Studio, IntelliJ, Eclipse, Proxmox

Additional information

Languages: Spanish (Native), English (First Certificate).