

Pablo Setrakian

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EDUCATION

Universidad de Extremadura

Bachelor of Computer Engineering and Information Technology

Mérida, Spain

Sep. 2021 – May 2025

EXPERIENCE

Currently, I do not have any work experience, which is why I am looking for opportunities to undertake internships where I can leverage my skills and expand my knowledge in the field of Computer Engineering.

PROJECTS

Below are some of my top projects from this academic semester:

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

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.

Technologies and Frameworks: Hadoop, Apache Spark, MSSQL, MySQL, Cassandra, MongoDB, HTML/CSS, Junit.

Developer Tools: Git, Docker, VS Code, Visual Studio, IntelliJ, Eclipse.

ADDITIONAL INFORMATION

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