Anass Anhari

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 Portfolio | GitHub | LinkedIn

EDUCATION

Master's Degree in Machine Learning and Cybersecurity   09/2024 - Present
Universitat Politècnica de Catalunya (UPC)

Bachelor's Degree in ICT Systems Engineering   09/2019 - 09/2023
Universitat Politècnica de Catalunya (UPC)

SKILLS

Programming Languages	Python, C, Apex, VHDL, Erlang
Libraries/Frameworks	Scikit-learn, Pandas, TensorFlow, Flask, Next.js
Tools/Platforms	Docker & Swarm, Kubernetes, Azure DevOps, GNU/Linux, Git, SVN, LaTeX
Databases	SQL, MongoDB, Redis, Neo4j

EXPERIENCE

UPC | Associate Professor   Manresa, Barcelona, Spain | 09/2024 – Present

- Conduct lab sessions for undergraduate students, mentoring, providing guidance and supervising them in their digital systems design projects.

DELOITTE | Developer Analyst   Barcelona, Spain | 09/2023 – 09/2024

- Worked as a developer focusing on the technical implementation for major energy clients, including Repsol, CHC Energía, and Iberdrola to deliver solutions to the industry's specific needs.
- Achieved a significant performance improvement of 62% on bulk data manipulation operations, optimizing the code and DML operations by using queueable batches and modifying inefficient queries and triggers. Proven ability to troubleshoot and resolve production issues effectively.

UPC | Flair AI/ML & 5G Research Project   Manresa, Barcelona, Spain | 06/2022 – 08/2023

- Collaborated on a European consortium research project focusing on Federated Learning and VEDLIoT (Very Efficient Deep Learning in IoT) toolchain integration, along with implementing a 5G end-to-end setup using SDRs and OpenAirInterface5G for UPC (Universitat Politècnica de Catalunya).
- Developed and configured a 5G network, allowing UPC to conduct various experiments and studies, and contributed to the Open Source community by publishing an easy-to-follow setup manual on GitHub.
- Implemented a voice recognition use case within the Federated Learning framework, achieving good performance and ran multiple federated scenarios over the 5G network.
- Developed optimized Federated Algorithms that leveraged clients with higher computational resources (GPU, DRAM, ...) to achieve accuracy and fit time close to that of centralized scenarios.

PROJECTS / OPEN-SOURCE

PREDICTING UNIVERSITY ENROLLMENTS WITH MACHINE LEARNING

Python, Scikit-learn, Pandas, Matplotlib, Tkinter

- Developed a tool to predict university enrollments to determine faculty hours to hire and available classroom space, replacing manual and significant efforts that required extensive experience.
- Proposed and implemented Machine Learning techniques generating predictive models based on the previous academic history of the students.
- Achieved an excellent accuracy rate (85% - 95%) in predicting enrollments across the majority of subjects, significantly reducing the complexity of process and revolutionizing it.