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PROFILE

Mathematics and Computer Science student with a strong analytical mindset and a passion for software development and data science. Currently exploring opportunities to apply my knowledge in real-world projects, particularly in full-stack development, AI, and data-driven applications. Seeking an internship to further develop my expertise and contribute to innovative solutions.

EDUCATION

09/2023 – present
Tunis, Tunisia

Bachelor's degree in Mathematics and Computer Science
Faculty of Science Tunisia
- Developing strong expertise in **mathematics, computer science, and software development**, with coursework in **analysis, algebra, probability, statistics, cryptography, and computer networks**.
- Gaining hands-on experience in **programming (Python, Java, C, R), data analysis (Pandas, NumPy, Matplotlib, Seaborn), database management (MySQL, PostgreSQL), and system administration(Linux).**
- Skilled in **UML (Unified Modeling Language) for system and software design**.

SKILLS

- Programming Languages: Python, Java, C, R
- Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn
- AI: Scikit-learn, SciPy, NLTK, FastAPI
- Databases: MySQL, PostgreSQL, MongoDB
- Web Development: HTML, CSS, JavaScript, React, Node, Express
- UML: Unified Modeling Language for system and software design

PROJECTS

Data Analysis Dashboard
Python, Pandas, NumPy, Matplotlib, Seaborn, Tkinter
An interactive dashboard that allows users to upload datasets and perform exploratory data analysis.
The app generates various visualizations such as bar charts, line plots, and heatmaps to provide insights into data.
Statistical calculations like mean, variance, and correlation are also displayed, making it a comprehensive tool for data analysis.

Calorie Counter
HTML, CSS, JavaScript
A website designed to help users track their daily calorie intake. Users can input the amount of calories they plan to consume for breakfast, lunch, dinner, and snacks.
The site calculates the remaining calories based on the user's input and provides a simple, interactive way to manage their diet.

movie rating prediction (recommendation system) 🔗
Python, Pandas, Matplotlib, Seaborn, Scikit-learn, Surprise, TensorFlow/Keras
Developed a comprehensive movie recommendation system leveraging multiple machine learning techniques to predict user ratings and generate personalized movie suggestions.
- Performed data preprocessing including cleaning, encoding, and constructing user-item interaction matrices from raw datasets.

- Built and evaluated various models such as K-Nearest Neighbors (KNN), Linear Regression, Singular Value Decomposition (SVD), SVD++, and an Autoencoder to optimize recommendation accuracy.
- Implemented model training, validation, and performance comparison using RMSE metrics, visualizing results for clear insights.
- Developed a TensorFlow-based autoencoder to capture latent features for improved rating predictions.

Smart Queue Management System 🔗

React.js, Node.js, Express.js, MongoDB

A full-stack web application designed to reduce wait times and improve service efficiency by allowing users to manage their queue remotely.
- Built a responsive frontend with React.js for user-friendly interaction.
- Created backend APIs with Node.js and Express.js, storing data securely in MongoDB.
- Implemented user profiles with encrypted authentication.
- Provided real-time updates on queue status and estimated wait times.
- Currently deployed; backend-to-frontend connection is under final integration to complete the live functionality.

EXTRACURRICULAR ACTIVITIES

I have been actively involved in student organizations, including IEEE and ATIA, where I participated in workshops, competitions, and technical events. These experiences have enhanced my teamwork, leadership, and problem-solving skills. Additionally, I have earned certificates in various fields, further strengthening my expertise in software development, data science, and AI.