DAVID MIRELES

Tecnológico de Monterrey, Monterrey, Nuevo León

📞 +52 8115352907 ✉ mirelesdavid04@outlook.com 💼 linkedin.com/in/mirelesdavid ⭘ github.com/mirelesDavid

Education

Tecnológico de Monterrey GPA 96 / 100   **August. 2022 – June 2026**
Bachelor of Science in Computer Science   *Monterrey, Nuevo León*

Relevant Coursework

- Data Structures and Algorithms
- Google Cloud Computing Fundamentals
- Intro to Machine Learning (Duke)
- Object Oriented Programming
- Software Analysis
- Web Developer

Experience

Hackathon Winner   **March 2024**
Hackathon uOttaHack 6 x i-Hack Mty   *Monterrey, Nuevo León*

- Conceptualized and implemented a groundbreaking loyalty program centered around a unique digital currency, aptly named "tokens," allowing customers to redeem rewards across a spectrum of products and services.
- Employing a meticulous blend of creativity and strategic thinking, we conceptualized an immersive UX/UI framework tailored to the unique needs and preferences of Qualtia's diverse customer base.
- Utilized cutting-edge technologies such as Figma for design prototyping, PostgreSQL for robust database management, and Node.js with Express for seamless backend functionality, coupled with HTML and CSS for frontend.

Hackathon   **September 2023**
Hackathon MTY   *Monterrey, Nuevo León*

- Led an outstanding team in creating a cutting-edge chatbot for Banorte, powered by the powerful OpenAI language model with fine-tuning. Our solution educated the chatbot on financial topics and Banorte's corporate culture
- Designed and developed a minimalist website using cutting-edge technologies such as JavaScript, HTML, and CSS to implement the chatbot, providing an intuitive and attractive user interface for Banorte's customers.
- Collaborated closely with finance experts and Banorte representatives to ensure the chatbot provided accurate and valuable information to users, enhancing user interaction and satisfaction.

Projects

Virtual Personal Assistant with OPENAI | *Python*   **September 2023**

- Developed a Python-based personal assistant using key libraries for speech recognition, text-to-speech, AI integration, and web access.
- Empowered it to perform various tasks, including playing music, conducting Google searches, interfacing with GPT, and responding to common greetings and commands.

Implementation of Intelligent Traffic Light for Emission Reduction | *IoT, Python*   **October 2023**

- Led a project to implement an Intelligent Traffic Light system aimed at reducing vehicle emissions in urban areas.
- Developed a Machine Learning model, using linear regression, to predict optimal traffic light timings, minimizing wait times and CO_2 emissions.
- Performed comprehensive data analysis to derive insights for effective traffic management strategies.
- Contributed to the design and implementation of the project infrastructure, including Firebase database integration and a web interface developed using JavaScript, CSS and HTML for data visualization.

Grade Prediction with Machine Learning | *Python*   **November 2023**

- Utilized Python libraries like pandas, matplotlib, and numpy for precise mathematical calculations and impactful visualizations, creating a realistic dataset with variables like study time and TV time, crucial for the model's success.
- Developed and fine-tuned a machine learning algorithm for grade prediction, incorporating gradient descent and regression techniques without using specialized libraries like scikit-learn or TensorFlow.
- Conducted extensive epochs of gradient descent to optimize model parameters and achieve accurate predictions.

Technical Skills

Languages: Python, Java, C++, HTML/CSS, JavaScript, SQL
Developer Tools: VS Code, PyCharm, XAMPP, Figma, Google Cloud Plataform
Technologies/Frameworks: Linux, GitHub, Node.js, Express.js, React.js, mySQL, postgreSQL

Leadership

- Innate talent for leading diverse teams fosters collaboration. Adept at connecting across backgrounds while pursuing growth via "Leading People and Teams" specialization, University of Michigan.