

# Tala Ismail

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## EDUCATION

**Lebanese American University, Beirut, Lebanon**

Aug 2021 – June 2024

Bachelor of Sciences in Computer Science

## WORK EXPERIENCE

**Siren Analytics, Beirut, Lebanon**

Jan – May 2025

**Position: AI Engineer intern**

**Quarry Monitoring in Lebanon:**

- Built YOLOv9 models to detect and segment over 1,200 quarry sites using satellite imagery.
- Used 3D data for depth estimation to support environmental monitoring and anti-corruption efforts.

**Voice Assistant:**

- Built a fully offline multilingual voice assistant using Voice Activity Detection, Whisper Speech-to-Text, a Local Language Model, and Coqui's Text-to-Speech. (using Python)
- Implemented real-time streaming and Gradio UI for seamless, low-latency interaction.

**WzTechno, Beirut, Lebanon**

May – Aug 2023

**Position: WordPress developer intern**

- Learned how to work with HTML and CSS.
- Excelled in WordPress development, mastering theme creation, online edits, and issue troubleshooting.

## PROJECTS

**Database project: Car dealership** (course project):

- Designed a car dealership database covering cars, buyers, sellers, salespeople, and financing.
- Tracked sales, financing terms, and salesperson performance with entity relationships.
- Created queries for simple searches and complex tasks like identifying top-selling models and calculating salesperson revenue.

**Mobile Application Projects:** (course project):

- TALA clothing shop Application** (Android): This project entailed designing and developing a user-friendly interface for customers to easily choose clothes, customize sizes, and add items to their cart seamlessly.
- Contacts Application** (Flutter): This Project entailed designing and developing a user-friendly interface where users can sign up, log in to their accounts, and then add, update, and delete contacts.

**Machine Learning Project: Students adaptability levels during online education** (Course Project):

- Built Decision Tree and Random Forest models to predict students' adaptability to online learning during COVID-19.
- Performed data preprocessing, model tuning, evaluation, and analysis using a confusion matrix.

**Research Paper: Malaria Disease Model**

**Co-authored** and published in **Knowledge-Based Systems (Elsevier), 2025**

Developed an RBFNN-BR model under Dr. Zulqurnain Sabir to simulate malaria dynamics, incorporating pesticide and medication effects. Optimized performance using Runge-Kutta datasets and Bayesian regularization. Achieved minimal error and validated results against existing literature, demonstrating strong skills in modeling, neural networks, and data-driven disease analysis.

DOI: [10.1016/j.knosys.2025.113722](https://doi.org/10.1016/j.knosys.2025.113722)

## CERTIFICATIONS

Data Analysis Essentials certificate – Coursera (IBM) – Dec. 2024

Excel basics for Data Analysis certificate – Coursera (IBM) – Dec. 2024

Volunteering Certification – MMKN, LAU, Beirut, Lebanon – Sep. 2023

## SKILLS

**SOFT SKILLS:** Time management, Team collaboration, Problem-solving mindset, Analytical thinking, Accountability.

**COMPUTER SKILLS:** Machine Learning, Computer Vision, Natural Language Processing, Speech Recognition, Generative AI, Data Analysis, Python, Scikit-learn, Pytorch, Power BI, Java, C, C#, SQL, HTML/CSS, WordPress, Android Studio, Flutter, Git.

**LANGUAGE SKILLS:** Native Language- Arabic | bilingual proficiency (C1) – English | bilingual proficiency (C1) – French