Selma Bettaieb AI |ML Enginner

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in https://www.linkedin.com/in/sambett/   🔗 https://portfolio-selma-bettaieb.vercel.app/

PROFILE

Impactful Machine Learning & AI Engineer with hands-on experience in RAG systems, semantic search, computer vision, and health risk modeling. I enjoy working autonomously in cross-cultural teams, grounding technical design in empathy and real-world needs. Always curious, I aim to bridge data science, infrastructure, and AI to solve practical problems and look forward to building the future, one project at a time.

PROJECTS

Plant Disease Classifier – Transfer Learning Study 🔗   2025
Keras · VGG16/ResNet50 · Image Augmentation
- Compared CNNs on 1,530+ plant images to detect 3 disease classes
- Published interactive web demo with model performance results

Health Risk Analysis for Female Farmers 🔗   2025
Scikit-learn · NLP · PCA/MCA · FastAPI
- Worked with a small dataset (80 entries) and over 60 features
- Applied PCA and MCA to reduce dimensionality while preserving over 95% of variance
- Developed a pipeline for predicting respiratory, skin, and neurological risks

NeuroChatRAG – Medical Q&A with RAG 🔗   2024
LangChain · FAISS · PubMedBERT · Streamlit
- Built a retrieval-augmented chatbot answering neurological health queries
- Processed 9,000+ PubMed articles into a searchable vector database

Real-Time Sentiment Analysis Platform   2024
Next.js · Transformers.js · DistilBERT · Firebase
- Built full-stack feedback system with multilingual sentiment analysis
- Integrated client-side AI using DistilBERT for improved metrics

Helmet Detection – Safety Monitoring via Computer Vision 🔗   2024
YOLOv8 · OpenCV · Streamlit
- Trained a 3-class object detection model (helmet/head/person)
- Deployed real-time detection app with image/video/webcam input

EDUCATION

Computer Science Engineering Student   09/2022 – Present
Sfax Faculty of Sciences 🔗   Tunisia, sfax

VOLUNTEERING & EXPERIENCES

AIESEC | Global Intern   06/2025 – 08/2025
- Developed a semantic search system for 3,500+ North Indian recipes   India
- Helped users with allergies discover safe foods using vector similarity

AIESEC | International Volunteer   07/2023 – 07/2023
- Worked with children aged 2 months to 12 years in early-childhood centers,   Morocco
learning to navigate care challenges outside my technical background
- Gained real-world insight through hands-on teaching in unfamiliar settings,
fostering empathy and adapting lessons across diverse cultures

AIESEC | English Teacher   08/2022 – 10/2022
- Delivered English lessons to 40+ learners, adapting communication styles across   Turkey
language barriers and cultural norms in Turkey

LANGUAGES

- Arabic (native)   • English (fluent)   • French (conversational)