

RODWAN BAGDADI

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EDUCATION

German Jordanian University

Bachelor of Mechatronics and AI Engineering

Expected Graduation: July 2025

Madaba, Jordan

Bochum University of Applied Sciences

Exchange Semester

Sep 2023 – Mar 2024

Bochum, Germany

WORK EXPERIENCE

Bosch Engineering GmbH

Software Engineering Intern

Mar 2024 – Sep 2024

Abstatt, Germany

- Developed and optimized **machine learning models** using **Ensemble Learning** and **Random Forests in Python**, achieving **top 20%** performance on Kaggle competition through advanced feature engineering and model optimization techniques
- Implemented advanced **state estimation systems** using **Kalman Filters** in **MATLAB** and **Python**, demonstrating proficiency in both linear and non-linear system modeling for real-time applications
- Applied **prompt engineering** techniques with internal **GPT-3.5 Turbo** models, conducting systematic evaluations and optimizations to maximize AI model performance

PROJECTS

Fake News Detection System | *Graduation Project*

Flask | **XGBoost** | **BERT**

- * Built an end-to-end **NLP pipeline** using **TF-IDF vectorization** and **XGBoost** classifier, achieving **92%+ accuracy** on fake news detection with comprehensive preprocessing and feature extraction
- * Integrated **DistilBERT transformer model** from **Hugging Face** for advanced text classification, leveraging pre-trained embeddings and fine-tuning techniques to capture nuanced linguistic patterns
- * Developed ensemble approach combining multiple ML algorithms (**SVM**, **LightGBM**, **Random Forest**, **Logistic Regression**) with consistent **90%+ precision** and recall across models
- * Deployed scalable web application using **Flask** backend and **HTML** for frontend for real-time prediction capabilities

Business Intelligence Analytics Platform

Power BI | **MySQL** | **Python** | **DAX**

- * Engineered comprehensive **data pipeline** connecting **MySQL** databases to **Power BI** dashboards, implementing automated data preprocessing and currency normalization for multi-regional analysis
- * Applied **statistical analysis** and **pattern recognition** to identify key business insights including **Pareto principle** validation (top 20% customers = 80% revenue)

Diabetes Classifier

Python | **SVM** | **Scikit-learn** | **Pandas**

- * Developed robust **binary classification model** using **Support Vector Machine** on healthcare dataset of **70,692 processed samples**, achieving **74.92%** accuracy through systematic data cleaning and feature selection
- * Conducted comprehensive **model benchmarking** across 4 algorithms (**SVM**, **KNN**, **Random Forests**, **Decision Trees**), implementing cross-validation and hyperparameter tuning to prevent overfitting

TECHNICAL SKILLS

Programming Languages: Python, MATLAB, HTML, SQL

AI/ML Frameworks: PyTorch, TensorFlow, Scikit-learn, Hugging Face

Data Science Libraries: Pandas, NumPy, Matplotlib, Seaborn

Development Tools: Git, VS Code, Flask, FastAPI

Databases & Systems: MySQL, Power BI

NLP & ML Concepts: Text Classification, Feature Engineering, Model Optimization, Ensemble Methods

Languages: Arabic (Native), English (Fluent), German (Intermediate B1)