# Ferdaous Bouzaiene

Data Scientist

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## Education

**Higher School of Communication of Tunis (SUP'COM)** — Tunis, Tunisia

*Engineering degree in Information and Communication Technologies - Data Science Specialization* — *2017 – 2021*

- Concentration in Artificial Intelligence, Machine Learning, and Data Structures.

**Faculty of Science of Monastir** — Monastir, Tunisia

*Diploma of preparatory studies for engineering schools (rank: 98/700)* — *2015 – 2017*

- Concentration in calculus and linear algebra.

## Work Experience

**Undergraduate Research Assistant** — Strasbourg, France

*ICube Laboratory, University of Strasbourg* — *May 2020 – Dec. 2020*

- Studied and analyzed 4 medium-large remote sensing datasets (30k to 50k images per class) as well as preparing regular reports on the choice of classes and features.
- Implemented deep learning models to classify large unlabeled datasets using features learned from smaller labeled datasets, attaining 78% accurate results that were referenced in an ongoing research paper. (Domain Adaptation)
- Improved the accuracy by 3% by developing and documenting the model's architecture and the data pre-processing steps.

**Machine Learning Intern** — Tunis, Tunisia

*SFM Technologies* — *July 2019 – Sept. 2019*

- Built a machine learning model to detect, evaluate and forecast the behavior of the company's clients to improve customer service and enhance business efficiency.
- Designed a data visualization dashboard to track the model's output and generate reports which subsequently boosted the project's intelligibility.

## Academic Projects

**Music Recommendation System**

- Developed a recommendation engine using content-based recommendation approach to propose songs based on the user's taste.
- Applied the cosine similarity to measure similarity between lyrics to choose the most similar songs.

**Fake News Detection: NLP Project**

- Distinguished between fake and real news using TfidfVectorizer that obtained an accuracy of 92%.
- Wrote a data mining algorithm to extract data from Twitter and cleaned and prepared the dataset.

**Analyzing IMDb Movie Reviews: Sentiment Analysis Project**

- Created a model using neural networks to predict whether the movie reviews obtained from IMDB are positive or negative resulting in a 84% accuracy.

**Customer Churn Prediction**

- Worked on a model that predicts which customers are most likely to leave the company and identifies the reasons behind their departure, 81% accuracy achieved.
- Chose the features in the model using Lasso coefficient and applied a Logistic Regression classification algorithm .

## Technical Skills

**Programming Languages**: Python, C++, SQL
**Libraries/Frameworks**: Pandas, NumPy, Scikit-Learn, Matplotlib, Tensorflow, Keras, OpenCV, Flask
**Algorithms/Architectures**: Logistic Regression, XGBoost, Random Forest, CNN, LSTM-RNN
**Developer Tools/OS**: Git/Github, Linux

## Languages

**Languages**: English: Bilingual Proficiency French: Bilingual Proficiency