Raed ROKH

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EDUCATION

Télécom Paris — Paris, France
Engineering Degree — *September 2024 - July 2026*
Double majoring in Applied Mathematics and Data Science
Coursework: Probability, Statistics, Machine Learning, Optimization Theory, Finance, Programming

SUP'COM — Tunis, Tunisia
Engineering Degree — *September 2022 - July 2025*
Coursework: Digital Signal Processing, Data Structures and Algorithms, Concurrent programming, Filter Design, Information Theory, Statistical inference GPA : 4.0

Esprit Prépa — Tunis, Tunisia
Preparatory School MPSI-MP* — *September 2020 - July 2022*
Two years top level curriculum, in order to prepare for the entrance examinations for the top Tunisian and French "Grande Ecoles". GPA: 4.0

EXPERIENCE

Tunisia Stock Exchange — Tunis, Tunisia
Summer intern — *July 2023 - August 2023*
- Gained insights into financial market operations, focusing on trading processes and market infrastructure.
- Contributed to analyzing market data to assess liquidity, volatility, and price movements.

PROJECTS

Task Accuracy Prediction using fNIRS and EEG Signals | *MATLAB* — September 2023 - June 2024
- Implemented advanced preprocessing pipelines for EEG and fNIRS signals from recent research papers, significantly enhancing data quality for precise task performance analysis.
- Developed and fine-tuned machine learning models to predict task accuracy, leveraging iterative optimization and validation methods to improve model precision and reliability.

Wildfire Spread Modeling and Stochastic Simulation | *Python* — September 2022 - September 2023
- Developed and implemented a Python-based simulation to model discrete-time wildfire spread, focusing on wind speed and directional impacts.
- Employed maximum likelihood estimation to derive transition probabilities and applied weighted least squares to fit a predictive model for propagation dynamics.
- Optimized the model to improve the accuracy of fire spread predictions and parameter estimations.

Banking Management System | *C++* — June 2022 - July 2022
- Designed and implemented a banking account management system using OOP, applying various data structures to optimize transaction processing and account management.

TECHNICAL SKILLS

Languages: Python, C++, SQL, MATLAB, R
Libraries/Frameworks: NumPy, pandas, SciPy, scikit-learn, TensorFlow, PyTorch, Keras, OpenCV
Mathematical/Statistical Methods: Linear Algebra, Probability Theory, Time Series Analysis, Statistical Inference, Monte Carlo Simulations, Optimization Methods
Signal Processing: Digital Signal Processing, Fourier Transforms, Filter Design, Wavelet Analysis, Time-Frequency Analysis

INTERESTS

Financial Markets, AI, solving puzzles, outdoor adventures (hiking, cycling).