

EMIL EL-ASMAR

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PROFESSIONAL SUMMARY

Final-year Data Science student who takes data work end-to-end: ML models, data pipelines, BI dashboards, and deployed products. Built four AI models powering a live club-management platform for a real client, a production app serving 1,450+ cities, and analytical pipelines on 10M+ rows. Works daily in Python and SQL, with modern AI tooling (Anthropic Claude, OpenAI, Cursor) as a genuine productivity multiplier.

TECHNICAL SKILLS

Languages: Python, SQL, TypeScript, pandas, NumPy, PySpark

Machine Learning: LightGBM, scikit-learn, Spark MLlib, Hugging Face Transformers (T5 fine-tuning, LoRA), Learning-to-Rank (LambdaRank), Clustering (K-Means, GMM), Isotonic Calibration, Feature Engineering, SMOTE, Cross-Validation

Data & Big Data: ETL Pipelines, Data Cleansing, Apache Spark, Data Warehousing, Dimensional Modeling, Web Scraping (Playwright), Time-Series Forecasting

BI & Visualization: Tableau, Looker, Power BI, Plotly, Matplotlib, Streamlit

Engineering & Deployment: FastAPI, Docker, Next.js, PM2, REST APIs, SSE, Git, Linux, NetworkX, A* Search

AI Tooling: Anthropic Claude API, OpenAI API, Claude Code (custom skills), Cursor, Apify, Prompt Engineering

PROJECTS

MifrasAI — AI Platform for Sailing-School Management | Python, LightGBM, Streamlit, Playwright

Final-year capstone, built for a real client (Derech HaYam, Herzliya Marina).

- Built four AI models to automate club management on 37,000+ historical events: weather-aware demand forecasting, cancellation-risk prediction, a deterministic A* marine safety-routing engine, and member segmentation with a LambdaRank recommender — on one bilingual dashboard, backed by ~400 automated tests.
- Demand model hit MAE 4.56, a 49% improvement over the seasonal baseline (7 of 7 rolling-origin wins); the calibrated cancellation model targets the 37.7% of private sails that end in last-minute drops.
- Diagnosed and fixed a critical data-leakage bug: a suspicious 0.998 AUC was traced to a data-source artifact and corrected to an honest 0.689 AUC by retraining on a clean schema.

Can I Nap — Real-Time Risk Inference Engine | TypeScript, Next.js, PM2

Live at caninap.online | github.com/MPG-Paradox/Can-i-nap

- Deployed a live full-stack app estimating risk from real-time alert data across 1,450+ Israeli cities (5-factor Poisson model, threat classifier built with zero manual labeling).
- Optimized core I/O from $O(n^2)$ to $O(n)$ inside a 3-process PM2 architecture (real-time poller, archive sync, SSE-pushed frontend); 78 tests, 137 KB bundle.

Student Success Predictor (OULAD) | PySpark, Spark MLlib

- Cut data volume 300x on a 10.6M-row PySpark pipeline by aggregating before joining; GBT reached 92.9% accuracy, with assessment participation the top predictor (43% importance).

AeroPredict — Flight Delay Prediction | Python, scikit-learn, FastAPI, Docker

- Built an ML pipeline predicting flight delays at 82% precision with SMOTE class balancing, deployed as a containerized FastAPI microservice.

NLP Fine-Tuning Study — Full Fine-Tuning vs. LoRA | Python, Hugging Face Transformers

- Benchmarked full fine-tuning against LoRA on T5-small across classification (SST-2), translation, and QA, comparing task quality against parameter count and compute cost.

Sales Segmentation BI Platform | SQL, ETL, Looker

- Designed a dimensional warehouse and ETL pipelines feeding Looker dashboards for regional revenue analysis and stakeholder reporting.

EDUCATION

B.Sc. in Data Science — Afeka Academic College of Engineering, Tel Aviv | 2023 – 2027

Coursework: Machine Learning, Neural Networks & Deep Learning, Statistical Aspects of ML, Big Data Analytics, NLP, Optimization, Advanced Algorithms, Time Series. Electives: AI Applications in Systems Engineering, Data-Based Management Models, Data-Driven Social Media Marketing.

PROFESSIONAL EXPERIENCE

Flight Supervisor — AeroHandling, Ben Gurion Airport | July 2023 – Present

- Lead crews of 4–7 across concurrent flights at Israel's busiest airport, owning operations end-to-end under strict SLA pressure; resolve live incidents and allocate resources across simultaneous flights during peak schedules.

Office Assistant — EL-ASMAR Advocates & Notary, Tel Aviv | January 2022 – July 2023

- Managed legal documentation and administrative workflows, improving client coordination and record accuracy.

ADDITIONAL INFORMATION

Languages: Hebrew (native), Arabic (native), English (fluent). **Volunteering:** Youth Leader & Math Tutor, Orthodox Scouts, Jaffa — led groups of 20+ teens.