

NICK ANTONIOU

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EXPERIENCE

TAKEDA

02/2024 - 08/2024

Data Scientist, MIT Capstone Project

Cambridge, MA

Spearheaded competitor intelligence on clinical trial protocols resulting in a projected ~\$8M cost reduction:

- Developed an LLM-powered ETL pipeline that converts unstructured clinical trial PDFs into harmonized, analytics-ready tables, replacing the previous manual approach, and introduced semantic matching of procedure names. Evaluated 50% reduction in data-prep time (~400 hrs/yr saved) with an 89% extraction accuracy (Python, Redshift, Azure, GPT-4o)
- Deployed app for the ETL process's interface to empower stakeholders to validate the converted data. App also included actionable visualizations used by Takeda's leadership to streamline protocols (Streamlit)

SATALIA

06/2022 - 06/2023

Data Scientist

Remotely (Athens, Greece)

- Refactored a large-scale workforce allocation optimization platform, which predicted footfall and optimized employee shifts for a major UK-based retailer; 70% reduction in system downtime (Python, AWS, Tensorflow, Docker, CI/CD)
- Architected an iterative vision-language LangChain pipeline, forming an automated way to create annotation paragraphs for ad-images and predicting CTR (GPT-4 and Hugging Face: CLIP, BLIP, fine-tuned RoBERTa)
- Prototyped an explainable AI "creative advisor" for the Content Intelligence platform, using anchor & counterfactuals, automatically suggesting image tweaks most likely to lift CTR; presented to WPP's CTO and enabled a \$400k funding increase
- Built an end-to-end sponsor analytics pipeline for YouTube and Twitch content, detecting product placement and prominence, merging with live-viewership data to quantify sponsorship value (Selenium, OpenCV, YOLOv7, Google Vision)
- Established and led various initiatives, such as Satalia's D.S. Knowledge Sharing platform (90% attendance)

ERNST & YOUNG (EY)

03/2021 - 06/2022

Data Engineer (promoted from intern, 2021)

Athens, Greece

- Led a 3-engineer team in the development and deployment of nightly ETL pipelines processing millions of banking EDW records, and of SQL reports for compliance and operations, collaborating with cross-functional stakeholders
- Automated ERP extracts, vessel-utilization calculations, and monthly BI reporting for a 300+ vessel fleet's EBITDA/P&L

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2023 - 2024

Master of Business Analytics, Operations Research Center (GPA: 4.8/5)

Cambridge, MA

- Research assistant at MIT's Operations Research Center, working with Prof. Nikos Trichakis to optimize U.S. organ allocation, by preprocessing patient data, and training & benchmarking the performance and continuity of several ML survival models
- Scholarships: from the Bodossakis, Leventis, and Gerontelis foundations, Union of Greek Shipowners, and HelleniQ Energy
- Machine Learning project: prescribing Fed's rate decisions, to maximize future macro-economic outlook (Julia, IAI)
- Optimization Methods project: cost minimization app for nutritional grocery baskets (Gurobi, Julia, Python, Streamlit)
- Cross-registered at Harvard University: graduate-level machine-learning coursework (projects using PyTorch, Hugging Face)

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

2016 - 2021

BSc in Management Science and Technology (GPA: 9.1/10; Top 4%)

Athens, Greece

- Concentration: Software Engineering and Data Science
- Co-authored and published "Data Virtual Machines: Simplifying Data Sharing, Exploration & Querying in Big Data Environments"; 2022 IEEE International Conference on Big Data; Osaka, Japan
- Thesis: analysis of data-driven advancements in the shipping industry; development of fuel consumption forecasting models
- Study Abroad: Erasmus+ at the Faculty of Engineering, University of Southern Denmark (Fall 2018)

TECHNICAL SKILLS

ML & AI (Pandas, Numpy, Sk-Learn, Keras, LLM, NLP, Hugging Face, PyTorch, Streamlit), **Languages** (Python, R, Julia, Java, JS) **Databases & Cloud** (SQL, No-SQL, Neo4j, Redshift, AWS, Azure), **Other technologies** (Git, Gurobi, Docker, CI/CD, Jupyter)