ANASTASIA ANTONOPOULOU

Prospective PhD Applicant - AI Decision Support, LLM Evaluation & Responsible AI

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RESEARCH PROFILE

Prospective PhD researcher in Informatics interested in the evaluation, selection and responsible adoption of Large Language Models in real-world decision settings. My current research combines AI benchmarking, data-driven criterion reduction and Multi-Criteria Decision Making (MCDM) to support transparent model selection. I am particularly interested in extending this work toward adaptive and explainable decision-support frameworks that account for performance, cost, reliability, privacy, fairness and other deployment constraints.

RESEARCH FIT - UNIVERSITY OF EDINBURGH

Research interests align particularly with the School of Informatics' work on artificial intelligence applied to real-world problems, including decision making, human-centred AI, privacy, fairness and ethical reasoning. A prospective doctoral direction is the development of dynamic, explainable frameworks for enterprise LLM selection and AI adoption, building on my prior work in benchmark redundancy, clustering and MCDM.

RESEARCH INTERESTS

Large Language Models (LLMs) • AI Evaluation & Benchmarking • Decision Support Systems • Multi-Criteria Decision Making • Responsible & Explainable AI • AI Adoption • Digital Transformation • Unsupervised Learning

EDUCATION

MSc in Applied Informatics - Harokopio University of Athens — **Oct 2026 - Present**

Specialization: Information Systems Administration and Digital Transformation

BSc in Informatics and Telematics - Harokopio University of Athens — **2022 - 2026**

Specialization: Information Systems Management | Final grade: 7.14/10

PEER-REVIEWED RESEARCH

Filiopoulou, E., Dede, G., Antonopoulou, A., Dimitrakopoulos, G., & Nikolaidou, M. "How Many Dimensions of Intelligence? A Data Driven Clustering of LLMaaS Benchmarks." **Accepted by IEEE, 2026.**

Acceptance confirmed; presentation and final publication details pending.

- Studied benchmark redundancy across 423 LLMs and 14 intelligence benchmarks using Spearman rank correlation and agglomerative hierarchical clustering.
- Derived three empirical intelligence groups, reducing overlapping benchmark signals before model selection.
- Contributed to a reproducible Python/Streamlit decision-support tool that re-derives benchmark groups from uploaded data and ranks models within a selected intelligence dimension.

RESEARCH EXPERIENCE

Bachelor Thesis - Cost-Intelligence Trade-off in LLMs via CRITIC-BWM — **Jun 2026**

Harokopio University of Athens

- Developed a hybrid MCDM framework for evaluating commercially available LLMs under competing intelligence and operational-cost criteria.
- Combined hierarchical clustering, CRITIC objective weighting and Best-Worst Method (BWM) subjective weighting using assessments from 19 industry experts.
- Applied VIKOR for compromise ranking and evaluated ranking robustness through multiple sensitivity-analysis scenarios.
- Produced computational supporting material and an applied decision-support implementation, linking methodological research with practical AI procurement decisions.

PROSPECTIVE PHD DIRECTION

Dynamic and Explainable Decision-Support Frameworks for Enterprise LLM Selection

- Investigate how model-selection criteria and benchmark structures evolve as LLM capabilities, providers and deployment requirements change.
- Extend performance/cost evaluation to deployment-relevant dimensions such as reliability, privacy, fairness, explainability, sustainability and governance.
- Develop adaptive weighting and ranking approaches that can reflect different organisational use cases rather than assuming one universal model ranking.
- Evaluate robustness longitudinally across changing model and benchmark snapshots, addressing the temporal limitation identified in prior work.

TECHNICAL & RESEARCH SKILLS

Methods: Hierarchical Clustering, Spearman Correlation, CRITIC, Best-Worst Method (BWM), VIKOR, sensitivity analysis, MCDM, benchmark evaluation

Programming & Tools: Python, Streamlit, Spring Boot, REST APIs, Git/GitHub

Research Practice: literature review, empirical data analysis, expert elicitation, research writing, reproducible decision-support implementation

SELECTED TECHNICAL PROJECT

Crowd Fundit - Crowdfunding Platform **Grade: 10/10**

- Developed a role-based crowdfunding platform with project creation, funding, approval and user-management workflows using a Spring Boot REST API and responsive web frontend.

PROFESSIONAL EXPERIENCE

Bournias & Co, Agents Importers - IT & Business Systems Support / Business Administration **Feb 2022 - Present**

- Support and maintain the company website, including content updates, troubleshooting and ongoing improvements.
- Work with the software applications and digital systems used by the industrial machinery represented and sold by the company, supporting day-to-day technical and operational use.
- Combine IT support with business administration, helping connect digital tools, machinery-related applications and internal business processes.

Our Little Stars - Administrative Support **Sep 2024 - Sep 2025**