

Georgii Melidi

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Professional Summary

PhD in Computer Science with a focus on machine learning, optimization, and decision-making under uncertainty. Experienced in building simulation environments, training models, and running large-scale experiments. Worked on time-dependent systems and real-world data, including financial transactions. Interested in applied machine learning problems involving decision-making, pricing, and risk.

Core Skills

Programming: Python, C++, R
ML & Data: PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib
Methods: Reinforcement learning, classification, regression, simulation, time series basics
Concepts: Machine Learning, Optimization, Algorithms, Statistical Analysis, Decision-Making Under Uncertainty

Experience

- Sorbonne Université – CNRS LIP6** Paris, France
Research Engineer / PhD Researcher Oct 2022 – Sept 2025
 - Designed and implemented algorithms for decision-making under uncertainty, combining machine learning predictions with optimization techniques.
 - Conducted large-scale experiments on synthetic and real-world inspired data, studying trade-offs between performance, robustness, and risk.
 - Worked on sequential decision problems and time-dependent systems, including learning-augmented algorithms and probabilistic modeling.
 - Wrote clean, modular Python code with reproducible experiments and structured evaluation pipelines.
- Center of Financial Technologies (CFT)** Novosibirsk, Russia
Intern – Junior Back-End Developer Summer 2019
 - Developed machine learning pipelines for classification and analysis of banking transactions.
 - Designed data preprocessing and feature extraction workflows for text-based financial data.
 - Worked with real financial datasets, improving data quality and model performance.

Selected Projects

- RL Dynamic Pricing:** Reinforcement learning project for sequential pricing under uncertain demand. Built a simulator with stochastic customer arrivals and limited inventory. Implemented a Deep Q-Network (DQN) and compared against heuristic baselines, achieving higher revenue in simulation. [GitHub]
- Tiny Robot Playground:** Developed a 2D robot navigation environment to compare planning and learning-based policies. Implemented a BFS shortest-path planner and a neural policy trained via imitation learning (PyTorch). Evaluated policies using success rate, number of steps, and reward. [GitHub]
- Guess What AI Thinks:** Built an interactive game based on an image model (SigLIP), where users predict model outputs. Uses custom label sets, allowing the model to rank labels based on image similarity. Deployed as a Streamlit application. [GitHub]

Education

- Sorbonne Université – LIP6** Paris, France
PhD in Computer Science Oct 2022 – Sept 2025
 - Thesis: *Algorithms Under Uncertainty: Robust Methods and Decision-Theoretic Evaluation*
- Novosibirsk State University** Novosibirsk, Russia
BSc & MSc in Applied Mathematics and Informatics Sept 2016 – July 2022

Selected Publications

- Angelopoulos S., Dürr C., Melidi G. (2026). *Decision-Theoretic Approaches in Learning-Augmented Algorithms*. ICLR 2026.
- Angelopoulos S., Dürr C., Melidi G. (2025). *Scenario-Based Robust Optimization of Tree Structures*. AAAI 2025.

Personal Interests

Passionate about sports and physical activity: CrossFit, swimming, cycling, and running.