Farid Najar | Resume

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Farid-Najar Farid Najar

Summary

PhD in Computer Science and Applied Mathematics. Expertise in designing machine learning and optimization systems, building discrete-event simulators, and deploying reproducible ML pipelines. Eager to apply advanced research expertise in data science and AI/ML engineering, delivering practical solutions that drive positive impacts while continuing to grow alongside the team.

Experience

Université Paris-Saclay/UVSQ **Versailles**
AI Research Engineer *Dec 2025–Jun 2026*

- Designed and implemented a non-euclidean optimizer for non-smooth optimization problems called *MELMO*. The work has been submitted for publication in a top-tier journal.
- Research on the integration of ML methods in metaheuristics to solve combinatorial optimization problems.

Université Paris-Saclay/UVSQ **Versailles**
Doctoral Researcher *Sep 2022–Nov 2025*

- Designed and implemented a delivery fleet simulator for vehicle routing with emission constraints.
- Developed and evaluated hybrid methods combining OR heuristics and reinforcement learning.
- Built reproducible Python pipelines with visualization and experiment tracking.
- Assisted teaching in CS courses; mentored students on Python and algorithms.

RTE **Paris**
Research Intern *Apr–Sep 2022*

- Prototyped multi-agent reinforcement learning approaches for real-time power grid control.
- Collaborated with research engineers to define environments, metrics, and baselines.

ENSAE **Paris**
Research Intern *Apr–Jul 2021*

- Studied multi-agent reinforcement learning policies in modeled labor markets with game-theoretic structure.

Education

Université Paris-Saclay **Versailles**
PhD, Computer Science & Mathematics *2022–2025*
Subject : Algorithms hybridizing AI and OR for supply-chain impact management
Supervisors : Prof. Dominique Barth and Dr. Yann Strozecki

Université Paris-Saclay **Orsay**
Master, Mathematics and Artificial Intelligence *2020–2022*

Université Paris-Saclay **Orsay**
Bachelor, Mathematics and Computer Science *2017–2020*

Skills

Programming: Python (PyTorch, JAX, scikit-learn, visualization), Julia, C/C++, SQL, git

ML: Reinforcement learning, Supervised learning, NLP/LLM, RAG

Optimization: Mathematical optimization, Operations Research, Metaheuristics

CS: Algorithms, Data structures, Parallel computing, Databases, Cloud computing (AWS, GCP basics)

Languages: Persian (Native), French (Bilingual), English (Bilingual), Chinese (HSK3 : Basic), Spanish (Basic)

Publications

Doctoral dissertation, Université Paris-Saclay
Najar, F. *2026*
Algorithms hybridizing AI and OR for the dimensioning and management of the impact of the supply chain on a local authority

Demand Acceptance using RL for Dynamic VRP with Emission Quota
Najar, F., Barth, D. and Strozecki, Y. *2026*
arXiv preprint arXiv:2603.13279.

Demand Selection for VRP with Emission Quota
Najar, F., Barth, D. and Strozecki, Y. *2025*
International Conference on Learning and Intelligent Optimization (pp. 64-79). Cham: Springer Nature Switzerland.

Master's thesis, Université Paris-Saclay
Najar, F. *2022*
Possibilities of a decentralized power grid management in real time using multi-agent reinforcement learning

Conferences

LION19
Pragues, Czech Republic *2025*
Presented the paper "Demand Selection for VRP with Emission Quota"

ROADEF
Amiens, France *2024*
Presented the works done on the static MFVA.

ROADEF
Rennes, France *2023*
Present as a participant.