

LAYAN ORAIDI

RESEARCH CV • EMPIRICAL ECONOMICS • AI & LABOR • RESEARCH SOFTWARE • OPEN SCIENCE

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RESEARCH INTERESTS

Applied microeconomics; AI and labor markets; firm dynamics and innovation; economic networks; empirical finance; causal inference; research software; reproducibility and open MENA data.

EDUCATION & QUANTITATIVE TRAINING

Corvinus University of Budapest | *B.A. Communication and Media Science, 2022–present* • GPA 3.7/4.0

Interdisciplinary degree with current research centered on quantitative empirical work, computational social science, and economic applications.

- **GRE General Test:** Quantitative 168.
- **Additional quantitative coursework:** completed Harvard mathematics coursework and MIT economics coursework; current public work applies panel econometrics, causal inference, time-series methods, networks, and statistical computing.

AWARDS & DISTINCTIONS

- **2026 Charles H. Dow Award — Winner.** CMT Association; USD 5,000 international research award for The Emergent Market Mind.
- **2026 CEU Arete Undergraduate Essay Competition — First Place.** Awarded for The Invisible Battlefield.

PUBLICATIONS & WORKING PAPERS

Too Smart to Wait: Artificial Intelligence and the Race to Premature Decisions | *Positive Science - Economics, approved for publication, 2026*

Theory of endogenous timing reversal: higher AI capability can intensify strategic pressure to act before information quality is socially optimal.

The Emergent Market Mind: Detecting Self-Organizing Intelligence in Financial Markets Through Multiscale Information Networks | *Charles H. Dow Award-winning research, 2026*

Develops a market-intelligence framework using long memory, information flow, entropy, and network connectivity to characterize market regimes.

MENA Firm-Level AI Adoption and Labor-Market Adjustment | *Working empirical project*

Building a provenance-traced listed-firm panel, 2018–2025, to study substantive AI deployment and employment adjustment using staggered-treatment/event-study designs, treatment-label validation, and robustness analysis.

RESEARCH SOFTWARE, DATA & INFRASTRUCTURE

MarketMind | *Creator & maintainer* • PyPI • Zenodo DOI 10.5281/zenodo.21844956

Open-source Python research software with typed API, CLI/dashboard, CI, tests, walk-forward evaluation, reproducibility documentation, and a prospective preregistered validation design.

Econometrics Notebook Library | *Creator*

Research-grade simulations and transparent reference implementations for Sun–Abraham, Callaway–Sant’Anna, BJS imputation, wild-cluster bootstrap, Conley HAC, shift-share, synthetic control, randomization inference, and local projections.

MENA Economic Narrative and Market Stress Observatory | *Dataset / reproducible pipeline*

Pilot open-data object with source-level provenance, retrieval dates, data dictionary, methodology, CI/tests, correction policy, and an independent-rerun release gate.

MENA Open Data & Evidence Lab / MODERN | *Founder & Research Director, 2026–present*

Building contributor-based MENA research infrastructure around auditable datasets, reproducibility, methods training, public releases, and external review.

OPEN-SOURCE CONTRIBUTION

PyFixest upstream contribution | *PR #1456, open/mergeable*

Documentation contribution to fitted-model result accessors; current goal is follow-on substantive inference/validation work in the econometrics ecosystem.

SELECTED EMPIRICAL & TECHNICAL WORK

Modern staggered-treatment simulation suite | *Econometrics Notebook Library*

Simulates heterogeneous treatment effects and implements/compares conventional TWFE, interaction-weighted Sun–Abraham, group-time ATT, and BJS imputation with transparent code and tests.

Research Assistant Technical Bench | *Creator*

Six timed research-engineering exams covering messy panel construction, 5M-row processing, event-study reproduction, large document ingestion, text-as-data, and debugging inherited empirical code.

Market-regime validation | *MarketMind*

Implements multiscale information metrics, dynamic networks, transaction-cost-aware walk-forward evaluation, baselines, uncertainty procedures, and preregistered holdout validation.

METHODS & TOOLS

- **Econometrics:** fixed effects; panel data; difference-in-differences/event studies; heterogeneous-treatment estimators; clustered inference; wild bootstrap; synthetic control; randomization inference; shift-share diagnostics; local projections; placebo and sensitivity analysis.
- **Programming/data:** Python, pandas, NumPy, statsmodels, scikit-learn, DuckDB, SQL, R, Git/GitHub, Parquet/Arrow, automated tests and CI.
- **Research engineering:** document ingestion/scraping, entity resolution, multilingual text-as-data, data dictionaries, provenance, hashes/manifests, reproducible environments, machine-readable outputs, LaTeX/Quarto.

RESEARCH LEADERSHIP & TEACHING

MENA Open Evidence Workshop Series | *Founder / Workshop Lead (planned series)*

Designing reproducible empirical-economics workshops with public slides, notebooks, exercises, solutions, recordings, and attendance evidence; first workshop focuses on reproducing economics results from raw data.

MODERN contributor network | *Program lead*

Contributor status tied to validated public work rather than honorary membership; planned outputs include independently reproduced datasets, methods workshops, and partner-reviewed releases.

PROFESSIONAL EXPERIENCE

Independent UX/UI & Digital Product Designer | *Remote, 2025–present*

Conduct user/competitor research, translate ambiguous requirements into structured systems, and manage paid client work and iterative delivery. Retained as earlier professional experience; current career focus is research.

Content Moderator / Desk-Based Policy Analyst | *CS MENA, Amman, Jan–May 2022*

Reviewed Arabic- and English-language content under detailed policy frameworks; documented edge cases and maintained consistent judgment in high-volume work.

LANGUAGES

Arabic — native • English — fluent • French — working/basic • Spanish — working/basic

SELECTED LINKS

Portfolio: <https://layanoraidi.com> • GitHub: <https://github.com/layan985> • MarketMind DOI: <https://doi.org/10.5281/zenodo.21844956> • OSF: <https://osf.io/nyseh/overview>