

Seçkin Özbek

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PROFILE

Data scientist and former career diplomat: LSE graduate training in causal inference, machine learning, and NLP, built on eight years at the Ministry of Foreign Affairs of Türkiye across multilateral economic diplomacy (WTO, UNCTAD, G20), bilateral affairs, and consular leadership. Designs and ships end-to-end analytical systems solo, from ML pipelines and large-scale text classification to multi-agent validation tooling, and turns complex analysis into clear recommendations for technical and non-technical audiences. Two connected tracks: applied data science (experimentation, predictive modeling and segmentation, NLP, agentic AI) and government and external affairs (negotiation, high-level briefing, multi-stakeholder coordination), with the intersection as the specialty: quantitative rigor applied to policy, institutional, and governance questions. Based in İzmir, Türkiye; open to remote, hybrid, and on-site roles.

CORE SKILLS

- **Programming and data:** Python for processing, analysis, and visualization; R; SQL.
- **Machine learning:** gradient boosting (CatBoost, XGBoost, LightGBM), neural networks (PyTorch), hyperparameter optimization (Optuna), rigorous model evaluation (weighted F1, Cohen's Kappa).
- **Experimentation and causal inference:** randomized experiment (A/B test) design and analysis; quasi-experimental methods for the questions A/B tests cannot reach: instrumental variables, difference-in-differences, regression discontinuity. Grounded in both major frameworks: the Rubin potential-outcomes model and Pearl's structural causal models (directed acyclic graphs, do-calculus). Currently extending into double machine learning (DML) for heterogeneous treatment effects.
- **Statistics and econometrics:** hypothesis and permutation testing, uncertainty and error-propagation modeling, survey methodology.
- **NLP and text analytics:** transformer models, sentence embeddings (SBERT), text classification at scale.
- **Agentic AI systems:** multi-agent architectures, retrieval-augmented generation (RAG), automated validation batteries, and LLM-based classification and extraction pipelines.
- **Knowledge representation:** ontology design and graph neural network (GNN) based knowledge graphs.
- **Network methods:** social network analysis (homophily, diffusion, and social contagion).
- **Government and external affairs:** negotiation and representation in multilateral and bilateral settings (WTO, UNCTAD, G20), diplomatic drafting and protocol, crisis team management, cross-cultural communication.
- **Analytics leadership:** data storytelling and executive-level briefing, multi-stakeholder coordination, mentoring, cross-functional project delivery.

SELECTED PROJECTS AND RESEARCH

Independent data science practice, İzmir (2026 to present).

Research Team Member, Values for Cohesion project, University of Birmingham (remote)

2026 to present

Project page · Blog post

- Contribute the quantitative measurement angle under Dr. Aslı Kandemir: testing whether and how values shift across communities, on a project funded by the UK Ministry of Housing, Communities and Local Government through Birmingham City Council, with school and community partners.
- Translate a cultural intervention into measurable outcomes: defining what to measure, how to detect change, and what would count as evidence that it worked, then writing the results up for non-specialist audiences.

Project Shimmer: multi-agent document verification system

2026

github.com/seckinozbek1/project-shimmer

- Built a multi-agent verification system with an automated validation battery over a retrieval (RAG) store: per-provision analysis, structural inventory, absence detection, and calibrated handling of uncertain findings, ensuring end-to-end data and citation quality.
- Published the accompanying methods piece, 'Who Checks the Checker', on the architecture behind the system and on validating AI analytical output.

SILICA-Bench: causal-integrity audit system

2026

- Agentic system that audits the causal integrity of research designs; on its first benchmark run it recovered a deliberately flawed design and flagged a planted weak instrument from raw, unlabeled data, with no checklist provided.

Values Pipeline: MSc dissertation, awarded Distinction

2025

github.com/seckinozbek1/values_pipeline

- Classified approximately 25,700 UN General Debate sentences (61 countries, 2017 to 2022) against ten World Values Survey dimensions using SBERT embeddings and CatBoost classifiers, with human-in-the-loop label validation.
- Built a Jensen-Shannon divergence index validated with permutation tests, plus an error-propagation model for pipeline uncertainty; currently converting the work into a peer-reviewed article.

Reappraisal of Causal Inference Research: replication study

LSE, 2025

Full report available online

- Replicated and stress-tested 'Civil Liberties in Times of Crisis' (Alsan et al., 2023), adding robustness checks for the instrumental-variable relevance assumption: causal measurement for settings where randomized testing is impossible.

Survey Attrition Classification: predictive modeling

LSE, 2025

- Built and validated predictive classifiers (Random Forest, XGBoost, LightGBM, MLP) for survey attrition, a churn-type dropout outcome, optimizing weighted F1 and Cohen's Kappa through automated hyperparameter tuning, with PCA, t-SNE, UMAP, and autoencoder features.

Further project: Detection Dance, an adversarial evaluation study of a commercial AI-text detector.

PROFESSIONAL EXPERIENCE

Ministry of Foreign Affairs of the Republic of Türkiye, career diplomat (Diplomacy Academy of Türkiye alumnus), August 2017 to June 2026. Across postings: orchestrated over ten high-level government-to-government, government-to-business, and multilateral events, and compiled a dossier for the Foreign Minister's Office covering 30+ major national investors in Iraq.

Second Secretary, Directorate General for International Economic Affairs

Sep 2025 to Jun 2026

Ministry of Foreign Affairs, Ankara

- Served as operational focal point for the President's and the Minister's G20 Johannesburg Summit file, managing end-to-end coordination of approximately 600 documents across approximately 40 countries and 20 international organizations.
- Coordinated Türkiye's engagement with the UNDP Regional Office and the UN Technology Bank for the Least Developed Countries, advancing capacity building and technology diffusion agendas.

Third Secretary, Deputy Directorate for Multilateral Economic Affairs

Sep 2023 to Sep 2024

Ministry of Foreign Affairs, Ankara

- Held the country file for relations with the World Economic Forum, World Food Programme, Food and Agriculture Organization, International Labour Organization, and United Nations Population Fund, including food security and development assistance.
- Prepared evaluations, background notes, and talking points for the President and the Minister of Foreign Affairs, working to strict reporting deadlines.

Third Secretary, Permanent Mission of Türkiye to the WTO

Jan 2022 to Aug 2023

Geneva, Switzerland

- Represented Türkiye at UNCTAD, the International Trade Centre, and WTO working groups on trade, economic development, technology transfer, and sustainability; recorded deliberations and converted them into analytical reporting for headquarters.^{1,2,3,4}
- Served as Rapporteur of the Thirteenth Session of the UNCTAD Trade and Development Commission, acting as liaison between the Secretariat and the Session Chair to finalize the draft report.⁵
- Co-organized the side event 'Artificial Intelligence Strategies for Inclusive and Sustainable Development' at the 25th Session of the UN Commission on Science and Technology for Development, presenting Türkiye's National AI Strategy.

1. UNCTAD Trade and Development Board, seventieth session (Geneva, June 2023): list of participants, TD/B/70/INF.1

2. UNCTAD Trade and Development Board, seventy-third executive session (February 2023): list of participants, TD/B/EX(73)/INF.1

3. UNCTAD Working Party on the Programme Plan and Programme Performance, eighty-third session (February 2022): list of participants, TD/B/WP(83)/INF.2

4. Joint Advisory Group on the International Trade Centre (ITC), fifty-seventh session (Geneva, 20 July 2023): list of representatives and observers

5. Opening remarks of UNCTAD Secretary-General Rebeca Grynspan, Trade and Development Commission, thirteenth session (November 2022)

Vice Consul, Consulate General of the Republic of Türkiye

Feb 2019 to Jan 2022

Erbil, Iraq

- Managed the visa and consular sections of the mission, supervising over a dozen staff and exercising independent decision-making authority on complex, time-critical cases; mentored four newly appointed Vice Consuls.
- Reported outcomes of UN Assistance Mission for Iraq briefings, produced daily press briefings, and sustained dialogue with political, bureaucratic, and business stakeholders.

Attaché, Bilateral Economic and Defense Relations with the United States and Canada

Aug 2017 to Feb 2019

Ministry of Foreign Affairs, Ankara

- Supported drafting of economic and defense policy positions; organized the Defense Industry Trade Dialogue and liaised with the Türkiye-US Business Council, AmCham, and DEİK.
- Served as Protocol Officer at the 2018 OIC Extraordinary Summit in Istanbul and at the Turkish presidential inauguration ceremony, accompanying visiting dignitaries at Emir and ministerial level.

EDUCATION

London School of Economics and Political Science (LSE)

Sep 2024 to Sep 2025

MSc, Applied Social Data Science, Chevening Scholar. Merit overall; Distinction for dissertation.

- Coursework: Causal Inference; Applied Machine Learning (Merit); Quantitative Text Analysis; Computer Programming; Social Network Analysis.
- Chevening: the UK FCDO's fully funded global scholarship, awarded competitively on merit and leadership potential.

Ege University, İzmir

2010 to 2016

BA, Economics, Faculty of Economics and Administrative Sciences.

- Selected coursework: Econometrics; Statistics; Economic Growth; Linear Algebra; Input-Output Analysis.
- Named to the Faculty Honour List in three semesters.

Independent Study

2026 to present

- Self-directed program in advanced methods: double machine learning (DML) and causal deep learning; graph neural networks, knowledge graphs, and ontology engineering; agentic AI system design; self-hosted open-weight LLM deployment; and LLM evaluation methodology (cross-model verification and judge-bias literature).

ADDITIONAL INFORMATION

Languages: Turkish (native); English (full professional: LSE graduate study, eight years of diplomatic service; IELTS overall band 7.5); French (limited working).

Certifications: UNCTAD P166 Short Courses on Key Issues on the International Economic Agenda (1st and 2nd Semester, 2022).

Writing: essays on applied data science and AI verification at medium.com/@seckinozbek.