Eren Ege Çelik

Izmir & Ankara, Turkey | erenege3500@gmail.com | erenege.dev | github.com/ErenEgeCelik

Physics undergraduate researching how information, probability models and execution interact in markets.

EDUCATION

Middle East Technical University, Ankara | BSc Physics 2025 - Jun 2028
Expected graduation: June 2028.

Izmir Institute of Technology | BSc Physics; GPA 3.6/4.0. Transferred to METU. 2024 - 2025

Izmir Ataturk High School | National entrance examination: top 0.7%. 2020 - 2024

Kadir Has University | Summer school Summer 2023
Augmented Mechanics; Augmented Electricity and Magnetism.

QUANTITATIVE RESEARCH & TRADING

Independent Quantitative Researcher & Prediction-Markets Trader 2026 - present
Grew a self-funded Polymarket account from $30 to approximately $1,200 over six months and about 400 trades across prediction markets, with no additional deposits. On-chain history available.

Weather markets | Daily maximum temperature | Code & research

- Built a Python probability engine combining airport observations, local sensors and forecast curves through Kalman filtering and Monte Carlo simulation; estimated daily maxima, next reports and distributions conditional on possible reports.
- Traded early access to observations and delayed repricing between connected temperature contracts. Precomputed conditional values and action triggers before reports arrived; adapted as makers closed those timing gaps.
- Investigated incremental weather signals through sensor ablations, residual analysis and leave-one-day-out ridge comparisons; evaluated probability forecasts against market prices with day-level uncertainty estimates.

Crypto markets | BTC five-minute up/down contracts | Code & research

- Collected more than 1,000 contract intervals of order-book, trade and feed data; investigated Chainlink settlement and exchange-to-book information transmission.
- Built a Brownian terminal-payoff probability model with median within-interval R-squared approximately 0.92 against market quotes. Outcome calibration favoured the market in the comparisons studied; taker delay consumed the measured timing lead.
- Formulated maker decision states and implemented one-step expected-value policies for quoting, cancellation and inventory management; modelled joint-fill branches, spread, rebates and unmatched-fill costs.
- Audited replay and paper-trading assumptions about queue position, partial fills and order/cancellation latency; tested policy value across execution scenarios and documented limits of simulated results.

Sports markets | Connected-contract relative value

- Mapped liquid match probabilities to thinner qualification and standings contracts using outcome-conditional distributions. Precomputed expected values and triggers so repricing decisions could be made by lookup.

OTHER EXPERIENCE

Engineering Intern | Ingenieurburo Bickele & Buhler, Stuttgart Winter 2023
SMD assembly, optical inspection and quality control; device software in C# and Arduino.

TECHNICAL SKILLS

Programming: Python (NumPy, pandas, Matplotlib, asyncio).

Tools & infrastructure: Git, Linux, AWS/VPS deployment, WebSocket data collection and monitoring.

Self-directed study: Probability theory and statistics, stochastic calculus, differential equations, real analysis and information theory.

AWARDS & SELECTIONS

TUBITAK 2205: National undergraduate scholarship awarded on university entrance rank.

Merit scholarship: One of the highest-scoring entrants to Physics at Izmir Institute of Technology.

Mathematics Olympiad: Selected for Izmir's regional training programme after two qualifying rounds, 2019-2020.

Conference organising staff: ICSM and ICSQMT international physics conferences, 2025 and 2026.

COMPETITIVE BACKGROUND

Football: Goztepe academy, U11-U15; team captain at both middle school and high school.

Chess: Tournament participation from an early age, with several medals; currently 2000 on Lichess.

Piano: Seven years of study. **Esports:** Valorant Immortal rank; competed in team tournaments.