

BILGEHAN ERDEMIR

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PROFILE

Computer Engineering student at Bilkent University with a 3.52 GPA. I like taking an idea all the way to a working product, as in a multi-journal academic publishing platform, a live business website and a Java game developed in a five person team. Before university I shipped two hardware and software projects that placed fourth at Teknofest. Alongside engineering I study quantitative trading and build my own backtesting and journaling tools. I am looking for a role where I can work on real products and learn from an experienced team.

MARKETS AND QUANTITATIVE WORK

Pairs Trading Research on Visa and Mastercard | 2026 · Python · one minute data

- Building a statistical arbitrage model on two co-moving payment stocks.
- Estimating the hedge ratio with a Kalman filter so the relationship updates as new data arrives instead of being fixed once at the start.
- Applying a wavelet transform to denoise the spread so entries are not triggered by short moves that carry no information.
- Judging the strategy on yearly PnL win rate and average gain per trade rather than a single equity curve.

Bitcoin Backtest Lab | 2026 · TypeScript · React · Node.js · Python · SQLite

- Built a local BTC/USDT research platform that checks Binance data for gaps and runs strategies written in Python.
- Signals fill on the next bar open with commission and slippage on both sides. The engine has 78 passing unit tests.

TradeTracker | 2026 · JavaScript · HTML · CSS

- Built a trading journal that flags trades taken outside my own rules and redraws the account without them.
- R-multiple and drawdown statistics plus a Monte Carlo that shows how risk per trade changes the odds of ruin.

EDUCATION

Bilkent University, BSc Computer Engineering | 2024 to present

GPA 3.52 / 4.00 · English medium instruction · expected graduation 2029

Bilnet Science High School | 2020 to 2024

Diploma 99.89 / 100 · national university entrance exam rank 6630 with a score of 511.28

GreenAct Erasmus KA220 Programme | 2023 · North Macedonia

Climate awareness project developed abroad in a six person international team.

ENGINEERING PROJECTS

Academic Journal Platform | ongoing · Next.js · React · TypeScript · PostgreSQL · Vercel

- Building an open-access platform that runs the full editorial and double-blind review workflow for multiple journals.
- Argon2id hashing, TOTP 2FA, nonce-based CSP, CSRF and IDOR protection and rate limiting, verified by 63 Playwright tests.
- Crossref DOI, ORCID and OAI-PMH 2.0 support plus a migration tool for the journals' 572-article DergiPark archive.

Şehr-i Sanat Business Website | 2026

- Designed and shipped a live website for a wedding and events company in Balıkesir. sehrisanat.com

Lord Of The Dices | 2026 · Java · LibGDX · Firebase

- Built a 2D card and dice desktop RPG in a five person team on an MVC architecture.
- Designed a central ScreenManager that handles transitions across more than 12 screens without memory leaks.
- Integrated Firebase cloud saves with asynchronous calls so the interface never blocks.

LifeCount Earthquake Response System | 2023 · Raspberry Pi · Python · OpenCV · Flutter

- Computer vision system that counts the people inside a building and passes that number to emergency teams so rescuers know how many may be under the rubble.
- Companion Flutter app showing assembly points on a map and letting survivors send requests to the authorities.
- Fourth place at Teknofest.

KOHS Automated Hydroponic Growing System | 2022 · Flutter

- Home scale soil free growing system that optimises plant growth parameters automatically.
- Flutter interface for remote monitoring and control.
- Fourth place at Teknofest.

SKILLS AND LANGUAGES

Programming: Java · C/C++ · Python · TypeScript · JavaScript · Dart · SQL (PostgreSQL and SQLite)

Frameworks and tools: Flutter · LibGDX · React · Next.js · Node.js · TensorFlow · OpenCV · Firebase · Raspberry Pi · Arduino

Concepts: MVC · asynchronous data handling · state management · time series analysis · Kalman filtering · wavelet transforms

Languages: Turkish native. English IELTS 6.5 with a degree taught entirely in English.

Other: ACM student club member. Chess skiing and table tennis.