

Berkay Arda Yıldız

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PROFILE

Founder of Demostra (AI study app live on iOS and Android), Kukurigo (daily mini-game competition app, launching on iOS and Android) and Cineholm. Software Engineer and Frontend Developer at Twin Science with 3+ years of experience specializing in Angular and React/Next.js, working in Agile/Scrum teams using Jira for sprint planning and delivery. Former Game Developer (6 published games) and Microsoft Imagineer. Committed to purpose-driven tech and social impact, actively volunteering to lead AI and STEM workshops for children.

SKILLS

- **Languages:** TypeScript, JavaScript, Java, Python, C#, C/C++, SQL
- **Frontend Ecosystem:** Angular, React, Next.js, React Native (Expo), HTML/CSS, Tailwind CSS, RxJS (Reactive Extensions for JavaScript), NgRx
- **Backend & Databases:** Node.js, Express.js, MongoDB, Redis, Socket.IO
- **Cloud & Deployment:** Microsoft Azure (static-to-dynamic backend migration), Railway, Vercel, Git
- **Methodologies:** Agile, Scrum (sprint planning, daily standups, retrospectives), Kanban
- **Tools & Technologies:** Jira, Unity, OpenAI (Prompt Engineering), WordPress, Cursor, Amplitude, Photoshop
- **Languages Spoken:** English – C1 (Advanced), German – A2 (Beginner), Spanish – A1 (Beginner)

WORK EXPERIENCE

Front-End Developer: *Twin Science* | September 2023 – Present

- **AI & Prompt Engineering:** Engineered an AI-powered content editor and developed custom Node.js prompt engineering workflows for text analysis and automated document generation.
- **Architecture & Migration:** Spearheaded the migration of a legacy Angular 8 project to a modern React architecture, establishing reusable UI components and a highly scalable modular design.
- **Performance Optimization:** Managed frontend architecture across 5+ concurrent projects. Accelerated app.twinscience.com by over 65% on Google PageSpeed Insights through advanced RxJS/NgRx state management and Angular rendering optimizations.
- **Cloud Deployment:** Deployed and maintained applications on Microsoft Azure, including migrating a static page to a dynamic backend, and used Railway for additional service hosting and deployment.
- **Full-Stack Frontend Ownership:** Sole frontend developer responsible for twinscience.com, app.twinscience.com, and the admin panel (custom routes), including an internal video player and H5P (interactive content) integration wired into the admin panel, plus SSO (Single Sign-On) login across internal Twin Science applications.
- **Agile Delivery:** Worked in Agile/Scrum teams, participating in sprint planning, daily standups, and retrospectives, and using Jira to track sprint backlogs and delivery across concurrent projects.
- **Product Development:** Constructed and maintained interactive components for code.twinscience (a Scratch-based educational platform) and enhanced the corporate WordPress site for SEO (Search Engine Optimization) and responsiveness.
- **Code Quality & Collaboration:** Ensured system stability through active Sentry monitoring, drove API integrations with the backend team, and fostered clean code practices through rigorous code reviews.

Frontend Intern: *Twin Science* | July 2023 – September 2023

Software Engineer Intern: *Beylikdüzü Municipality* | May 2023

Junior Game Developer: *Servo Studios* | June 2022 – February 2023

- Spearheaded the full lifecycle development of 5 mobile games using Unity and C#, shipping titles within strict 1-month deadlines as the sole developer and product manager.

IMAGINER Student Ambassador: *Microsoft* | November 2022 – June 2023

LEADERSHIP & PEOPLE MANAGEMENT

Intern Mentor: *Twin Science* | July – September 2024; July 2026

- Directly supervised and mentored two frontend interns who reported to me: one for two months in 2024 and one for a month in 2026.

Team Lead: *Gallifreyan Page (Graduation Project), Istanbul Aydın University* | 2024

- Led a team of three on our software engineering graduation project: designed the screens in Figma and built the frontend and backend, while one teammate owned testing and the other ran data analysis with Amplitude.

Team Lead: *Security Course Project, Istanbul Aydın University* | 2024

- Led a team of four on a security course's term project: weighed the team's proposals and made the final calls, divided the research work across the team, then compiled the findings into the final presentation to the instructor.

PROJECTS

Demostra | Founder | 2026 – Present

App Store | **Google Play** | [demostra.app](#)

- **Product:** Founded, designed, and shipped solo an AI-powered active recall study app for exam preparation: users explain a topic aloud or in writing, and the app marks it proven, fuzzy, or needs review, then schedules spaced repetition toward the exam date.
- **Timeline:** Took the product from first commit to live on both iOS and Android in about 5 weeks, including subscriptions (RevenueCat), study communities with moderation tools, voice mock interviews, and institution accounts.
- **Mobile:** React Native (Expo, TypeScript), on-device speech recognition with optional cloud transcription, Apple and Google Sign-In, push notifications, TR/EN localization.
- **Backend:** Node.js/Express API, MongoDB (Mongoose), Zod validation, JWT authentication, OpenAI question generation and answer grading with per-user AI quota and cost tracking, ElevenLabs TTS, scheduled jobs; hosted on Railway, marketing site on Vercel.
- **Privacy by Design:** KVKK/GDPR compliance package (DPIA, user agreements) and core product rules (e.g. institutions see learning results, never individual attention data), enforced by 95+ automated test suites.

Kukurigo | Founder | 2026 – Present

kukurigo.app | Launching on the App Store and Google Play

- **Product:** Built solo a daily mini-game competition app: every morning a wheel picks one of 36 mini-games, everyone plays the same game with one scored shot, and scores feed friend lobbies, a weekly league and province and country leaderboards.
- **Macera (v2.0.0):** Level-by-level adventure mode with 144 levels across 4 worlds at launch, lives, continues and a weekly star race; levels are authored as data and published through a locked catalog, with star thresholds measured by bots across 20,000 boards.
- **Anti-cheat:** Server-authoritative scoring: the client sends only moves, puzzle seeds come from an HMAC, and physics games are replayed on the server at a fixed 60 Hz.
- **Stack:** pnpm/Turborepo monorepo; Expo/React Native with RevenueCat, AdMob (server-verified rewards) and Sentry; Fastify, Drizzle ORM and PostgreSQL on Railway (EU); Resend; site on Cloudflare; TR/EN.
- **Quality:** ~2,100 automated tests and 46 database migrations across ~690 commits in 4 weeks.

Cinekhholm | Founder | 2025 – Present

App Store | **Google Play** | [cinekhholm.com](#)

- AI-powered movie tracking and discovery platform with multi-dimensional taste profiles, recommendations, and social features — Angular SSR web client plus native iOS and Android apps.
- Web: Angular (TypeScript), SSR with Express, Angular Material, Tailwind CSS, i18n (ngx-translate), Socket.IO client, analytics with Amplitude.
- Mobile: React Native apps for iOS and Android, with RevenueCat subscriptions and Apple/Google OAuth2 sign-in.
- Backend: Node.js/Express API, MongoDB (Mongoose), Redis + BullMQ, Socket.IO, JWT authentication, OpenAI integration, media processing (Sharp, Multer).

benibilgilendir.com | 2025 (retired)

- Built after the M5.8 Istanbul earthquake on 23 April 2025, when official sites kept crashing under load, so people could still get earthquake alerts by email while the official sources were unreachable.

- Polled AFAD and USGS every 5 minutes via cron, with each source backing up the other; filtered M3.5+ events within 200 km of Istanbul and emailed them over SMTP, each with its source and a GPT-4o-written note on depth, magnitude and distance.
- Reached 100–150 subscribers through social media and word of mouth and sent 1,000+ alerts at 99.9% uptime; the only failed deliveries came from mistyped addresses. Retired once the aftershocks faded. Technologies: Next.js, Node.js, Cron, SMTP, GPT-4o

Gallifreyan Page | 2024

- Full-stack sustainable e-commerce platform for books and music CDs with a recycling and donation program aligned with the UN SDGs.
- Built a GPT-4o powered AI assistant with custom prompt engineering for authors and readers.
- Technologies: Angular, .NET (C#), MongoDB, GPT-4o, Amplitude

Noova 212 | 2023

- Delivered a fully responsive corporate website for an architecture firm, achieving Google Lighthouse scores of 95 (Desktop Performance), 96 (Best Practices), and 91 (SEO).
- Technologies: JavaScript, CSS, HTML

5 Released Mobile Games (Servo Studios) | Unity, C# | June 2022 – February 2023

- Titles: Yummy Road, Auto Click Battle, Last Glider, Parking Stars, Rising Of Flappies.
- Acted as sole developer and product manager to design, program, and ship 5 distinct mobile games entirely from scratch, executing rapid 30-day development cycles per game.

Just Jumping Forever | 2022 | Google Play Store

- Crafted and shipped a 2D mobile game on Google Play, reaching 5000+ organic downloads and maintaining a 4.9/5 average user rating.

Jump Forever (Unity Game Jam | 4th/28) | 2022

- Ranked #4 overall and #3 in User Experience (UX) out of dozens of entries, based on 21 peer reviews (4.09/5 in UX and Visual Design).

VOLUNTEERING & COMMUNITY OUTREACH

AI Training Facilitator — YUSODES, Yeditepe University

- Invited by the Yeditepe University Social Support and Solidarity Club (YUSODES) to deliver an "Artificial Intelligence" training session for children, explaining core machine learning concepts through an accessible analogy.
- Recognized by YUSODES with a plaque of appreciation for the session.

Science Field Volunteer — YGA (Young Guru Academy), Bilim Seferberliği | 2024 – Present

- Ran Twin-kit science workshops for 600+ children in Samandağ (Hatay), Adana and Gaziantep, three cities hit by the 2023 earthquakes (August 2024 – May 2025); in Gaziantep I also bridged the visiting YGA Italy team and the children in English.
- Trained 10+ teachers on the Twin platform and kits in Zonguldak (October 2026). The kits are Twin Science's, so the platform I build at work is the one I teach with in the field.

EDUCATION

- **Istanbul Aydın University:** Istanbul, Turkey — B.S. in Software Engineering, 2020–2024
- **Yeditepe University:** Istanbul, Turkey — English Preparatory Program (C1 Level), 2019–2020
- **Erasmus+:** Lisbon, Portugal — Cultural Introduction Program, Oct 2018 – Nov 2018