

Kent Umut

Zürich, Switzerland | dev@kentumut.com
kentumut.com | github.com/kentumut | linkedin.com/in/kentumut

EDUCATION

Bachelor of Science in Computer Science

Zürich, Switzerland

ETH Zürich

Sep 2025 – Jun 2028 (expected)

- Relevant Coursework: Linear Algebra (Grade: 5.5/6.0), Introduction to Programming, Algorithms and Data Structures, Discrete Mathematics.
- Contributing member of the Computer Application Team at VIS, the ETH CS student association: shipped CI improvements and a backend feature to the Eventmanager, the platform VIS uses for event registrations.

High School Diploma (Matura)

Istanbul, Turkey

St. Georg Austrian High School (Österreichisches St. Georgs-Kolleg)

Sep 2020 – Jun 2025

- Admitted through Turkey's national entrance exam with a top 0.5% ranking; graduated with a 1.1 Matura (4.0/4.0 GPA), ranking #1 academically for three consecutive years.

WORK EXPERIENCE

Software Engineer Intern

Istanbul, Turkey

Defne (5G Telecom Software)

Nov 2024

- Sought out a placement at a 5G telecom software company during my Matura year and spent a month embedded with the backend team on a production Java/Spring codebase.
- Gained first-hand exposure to professional practice: code review, version control workflows, and CI/CD in a real engineering organization.

PROJECTS

Albert: Agentic Browser Focus Agent | Chrome MV3, React 18, TypeScript, Express, SQLite, AWS Bedrock (Claude), Elastic Beanstalk, GitHub Actions

- Built a Chrome MV3 extension that runs a sense-reason-act-remember loop over live browser events, classifying each page against the user's stated intention as FOCUS, UNCERTAIN, or DISTRACTION via Claude on Bedrock.
- Grounded model output in bounded SQLite queries rather than free-form generation, using structured tool-use with a multi-tool-per-round loop and server-side validation of answer blocks, so factual claims could not be hallucinated.
- Added RAG over persisted transcripts and browsing history for cross-session continuity, plus a 5-minute verdict cache to avoid re-judging repeat pages.
- Shipped through GitHub Actions CI (lint, typecheck, Vitest) to Elastic Beanstalk with health-check verification.

Mira: Autonomous Voice AI Agent | TypeScript, Fastify, Qdrant, AWS, Terraform, Turborepo

- Built a voice agent with sub-2s end-to-end response, using a custom binary WebSocket protocol instead of HTTP to cut per-message serialization and connection overhead.
- Cut ~1200ms of latency with speculative RAG pre-fetching over Qdrant and local ONNX embeddings, starting retrieval before the user finished speaking and removing a secondary LLM call.
- Reduced audio generation latency 43% with a parallel TTS queue and sentence-boundary buffering, which also made barge-in interruption possible mid-utterance.
- Deployed 7 microservices to ECS Fargate via Terraform, with autoscaling from 2 to 10 tasks on CPU load, multi-AZ VPC, and Redis for shared session state.

ETH Arena: AI-Powered Exam Preparation Platform | Next.js 15, FastAPI, Qdrant, Gemini 2.5, ONNX, PostgreSQL, Docker, Traefik

- Built a hybrid retrieval pipeline pairing local ONNX embeddings (all-MiniLM-L6-v2) with Gemini 2.5-flash, keeping embedding costs at zero while preserving semantic search quality over 10K+ questions in Qdrant.
- Added client-side PDF rendering with region selection, letting students crop questions directly from browser-rendered PDFs and skip manual transcription entirely.
- Built progressive tutoring with multi-step hints and semantic answer evaluation across numeric, multiple-choice, and open-ended types, with KaTeX rendering.
- Ran the whole stack under Docker Compose behind Traefik, with pytest and Vitest coverage on both sides.

LEADERSHIP & ACTIVITIES

Founding Board Member, Claude Builder Club ETH Zürich (Anthropic-supported) | Oct 2025 – Present

- Built and maintain the club's website (claudethzurich.com) as sole maintainer: migrated from a Vite template to Next.js 15 with a Supabase Postgres backend so board members can edit events in Supabase Studio without a redeploy, deployed via GitHub Actions to Vercel.
- Organized the first Anthropic hackathon in Zürich: 128 participants over 12 hours, 87% attendance, sponsorships secured from Anthropic, Zenline AI, Swiss Life, and J floor.
- Run speaker events bringing engineers from industry to campus.

Semester Spokesperson, VIS | Feb 2026 – Present: Elected to represent 600 CS students to faculty.

Co-Founder, Kolektif Oluşum | Nov 2023 – Jun 2025: Built a student network to 10,000+ members across 8 countries. Directed website development and org strategy.

TECHNICAL SKILLS

- Languages:** Java, Python, TypeScript
- Systems & Cloud:** AWS (ECS, RDS, CDK), Docker, Terraform, CI/CD (GitHub Actions)
- Backend:** Node.js, FastAPI, WebSockets, PostgreSQL, Redis, Qdrant
- Frontend:** React, React Native, Next.js

LANGUAGES

- English (C1), German (C1, ÖSD Sprachdiplom, Jun 2024), Turkish (Native)