

Efe Katircioglu

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EDUCATION

King's College London

Computer Science BSc (Hons) | Predicted First-Class Honours

London, UK

Sep 2023 – Jun 2027

- **Relevant Modules:** Elementary Logic With Applications: 75%, Database Systems: 72%
- **Current Modules:** Introduction to AI, Robotics, Programming Language Design, Operating Systems & Concurrency

WORK & RELEVANT EXPERIENCE

King's Labs

Academy Software Engineer

London, UK

Feb 2025 – Apr 2025

- Architected and deployed a full-stack Next.js application, by integrating dynamic client-side rendering with optimized server-side components and implementing a secure authentication layer using NextAuth.js with Google OAuth.
- Developed a suite of RESTful API endpoints for CRUD operations on user-specific data models, hosted on a serverless Neon PostgreSQL instance to enforce strict multi-tenancy and data isolation. Deployed on Vercel for real-time user traffic.
- Integrated error handling mechanisms, improving system reliability and simplifying debugging during production.

Amazon

Office Visit & AI/ML Immersion Day

London, UK

Oct 2024

- Participated in technical workshops during Amazon immersion day, exploring the end-to-end machine learning lifecycle on AWS, from data ingestion and model training to deployment, with a specific emphasis on key services like Amazon SageMaker.

Microsoft

Reactor Insight Day

London, UK

Oct 2024

- Attended a technical insight day to discuss Microsoft's engineering culture and Azure cloud services, which included an interactive workshop on integrating powerful pre-trained AI models for computer vision using Azure Cognitive Services.

PROJECTS & CERTIFICATIONS

Vibe Generator

Founder & Software Engineer

London, UK

Jun 2025 – Sep 2025

- Orchestrated an end-to-end user authentication flow leveraging the Spotify OAuth 2.0 framework, implementing stateless session management using JSON Web Tokens, and securing sensitive tokens by encrypting them with AES-256-CBC.
- Engineered a high-throughput data aggregation pipeline in Node.js, concurrently ingesting data from over 6+ external music APIs. Optimized ingestion logic by implementing parallel asynchronous requests, boosting data retrieval performance by 23x.
- Developed a dynamic, responsive frontend using a component-based architecture in Next.js and React that decreased the rendering time by 30%. Deployed the application on DigitalOcean Cloud Droplet, utilizing PM2 as a process manager.
- Implemented advanced performance optimizations, including a multi-layer caching system, intelligent request batching, and controlled concurrent processing to drastically reduce latency and respect external API rate limits.

Air Pollution Dashboard

Software Project Leader

London, UK

Feb 2025 – Jun 2025

- Directed a cross-functional team of four in the end-to-end design, development, and deployment of a JavaFX application to visualize complex environmental datasets, comprising over 5 million environmental records from 2018-2023.
- Engineered and optimized the data ingestion and cleaning pipeline, which reduced the processing time for the entire dataset by 75% and cut initial application load time by 50%, significantly enhancing overall performance and user experience.
- Implemented efficient query optimization and caching strategies alongside responsive frontend rendering techniques, reducing latency in data visualization by 60% and enabling interaction with large-scale datasets without compromising system stability.

Web Development Bootcamp – Udemy

Nov 2024 – Jun 2025

- Completed a comprehensive Full-stack Web Developer certification covering the MERN stack (MongoDB, Express.js, React, Node.js). Gained hands-on proficiency in core technologies including HTML, CSS, JavaScript, Node.js, React, and PostgreSQL.

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, TypeScript, Java, Python, SQL, HTML, CSS
- **Frameworks & Libraries:** Next.js, React, Node.js, Express.js, JavaFX, NextAuth.js
- **Other Tools:** DigitalOcean, Vercel, PostgreSQL, Neon, Git, GitHub