

George Retsilas

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GitHub — LinkedIn — Portfolio

IT Engineering student combining algorithmic rigor with modern Full-Stack and Mobile implementations. Proficient in crafting scalable applications using **React/Next.js** and native Android with **Kotlin Jetpack Compose**. Pragmatic problem-solver with a proven track record in hackathons and production-grade deployments. Seeking to deliver clean, efficient code in a demanding software engineering environment.

Education

BSc in IT & Electronic Systems Engineering

2022 – Present

International Hellenic University, Thessaloniki

(4th year of 5)

Technical Skills

Languages: JavaScript, TypeScript, Java, Dart

Frontend: Next.js, React, Tailwind CSS, Bootstrap, Zustand

Backend: Node.js, Express, MongoDB, SQLite

Mobile & Tools: Flutter, Kotlin Jetpack Compose, MVVM, Coroutines, Git, REST APIs, Firestore, Supabase, Postman, Figma

Achievements

3rd Place – OpenUp Thessaloniki Climate Hackathon

2025

- Spearheaded the Frontend development of *ThessInfo*, a React/MUI web app visualizing environmental data.
- Collaborated with the backend team to integrate **Django REST APIs**, ensuring real-time data synchronization.
- Solved complex data visualization challenges to display air pollution and recycling metrics on interactive maps.

Projects

PartyRoll – Party Games (Mobile App)

Google Play

- **Co-developed** and launched a production-grade Flutter application in a **2-person team**, featuring 6 distinct game modes and a custom content-creation engine.
- Architected an **offline-first** local database utilizing **Isar**, ensuring instantaneous data retrieval and management for thousands of dynamic game cards.
- Engineered a serverless data-synchronization protocol using **GZip compression and Base64 encoding**, enabling users to export and share custom decks via optimized text strings.
- Managed the full release lifecycle, including **In-App Purchases (IAP)** integration and production deployment via the Google Play Console.

DocAtlas – Multi-Tenant AI Knowledge Base (B2B SaaS)

Hackathon Project

- **Engineered** a plug-and-play, script-injected chat widget utilizing **Multi-Tenant ID validation** and dynamic CORS. This decoupling approach ensured strict origin security without requiring the client to build backend infrastructure.
- **Co-developed** a production-ready Retrieval-Augmented Generation (RAG) platform using **FastAPI** and **ChromaDB**, focusing on the data ingestion architecture.
- **Optimized the document processing pipeline**, implementing robust extraction logic for complex formats (PDFs, Excel) to ensure clean, high-quality data chunking for the semantic search engine.

DevAtlas – Developer Roadmap Companion (Android)

GitHub

- Served as the **Primary Developer** in a 6-person team, taking ownership of the technical implementation and delivering the core product logic.
- Designed the **UI/UX in Figma** and architected the codebase using **Kotlin Jetpack Compose**, ensuring a modular and scalable structure.
- Collaborated closely with team members responsible for analysis and testing, ensuring seamless integration of requirements within an **Agile** workflow.

- Developed a production-ready multilingual website for a tutoring center using **Next.js** and **Supabase**.
- Engineered a custom **Admin Dashboard** allowing the client to manage PDF content and images dynamically.
- Optimized performance and SEO, achieving high Lighthouse scores and ensuring full mobile responsiveness.

ThessInfo – Environmental Data Platform

GitHub

- Evolved a hackathon prototype into a structured **environmental intelligence platform** for analyzing air, water, and recycling data per municipality.
- Designed a modular architecture using **Next.js** with region-based routing and a unified data-fetching layer for scalable environmental intelligence.
- Implemented data normalization pipelines to build custom Water Quality (WQI) and Air Quality (AQI) indices using weighted scoring logic.
- Built interactive data visualizations and comparative insight dashboards to highlight pollution trends across municipalities.

Currency Calculator

GitHub

- Engineered a **Graph Traversal algorithm (DFS)** to calculate exchange rates between non-adjacent currencies.
- Implemented **bidirectional logic** to automatically derive inverse exchange rates when direct data was unavailable.
- Optimized system performance by implementing **database-level caching** for calculated paths.
- Built with **React**, **Node.js**, and **MongoDB**, featuring a secure admin panel for rate management.

Recipe Realm (Mobile App)

- Developed a cross-platform **Flutter** application with an **offline-first architecture**.
- Implemented local data persistence (SQLite) synchronized with **Firestore** when online.
- Features include user authentication, image compression/upload, and push notifications.

Languages

Greek: Native — **English:** Fluent