Ilias Michalas

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Patras, Greece — Date of Birth: Nov. 18, 2005

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Education

- **University of Thessaly** — Greece
  BSc in Computer Science & Biomedical Informatics (Undergraduate) — *2023 – Present*
  - **Relevant Coursework**: Pattern Recognition, Database Systems, Computer Networks, Artificial Intelligence, Medical Image Processing, Matrix Analysis, Computer Architecture, Pervasive Computing, Bioinformatics.
- **1st EPAL Patras** — Patras, Greece
  IT Applications Technician Diploma; Grade: 19.1/20 — *2021 – 2023*

Experience

- **TrafficMate, Ltd.** — Greece
  Junior Software Engineer — *Oct. 2025 – Present*
  - **High-Volume Media Upload Engine**: Implemented a chunked file upload pipeline using Laravel and Dropzone.js to handle large media payloads. Developed server-side stream reassembly logic, TTL chunk cleanup scripts, and client-side byte-progress tracking.
  - **System Integration & Workflow Optimization**: Contributed to backend system integrations and API endpoints, refactoring business logic across production web applications under senior guidance to enhance maintainability.
  - **Queue Architecture & Scraper Maintenance**: Maintained background scraper workers (RabbitMQ, Python) and implemented automated recovery schedulers in the Laravel Kernel to detect and clear stuck background job states.
  - **High-Concurrency Performance & Bug Fixes**: Resolved critical SQL injection vulnerabilities, optimized high-traffic rating modules using Memcached rate-limiting to prevent database write locks, and fixed mobile touch-scrubbing bugs.
- **Freelance Web Developer** — Patras, Greece
  Web Developer & Systems Consultant — *Jan. 2024 – Oct. 2025*
  - **Full-Stack Client Applications**: Architected scalable web applications using React, Next.js, and headless CMS platforms, focusing on performance, modular component design, and dynamic content management.
  - **Custom CMS & API Integrations**: Designed tailored web platforms, API endpoints, and database models using Next.js, Node.js, and headless CMS frameworks to streamline client content workflows and search engine optimization.

Projects

- **LeadFinder – B2B Intelligence & Automation Platform**: Architected a prospecting engine combining a Python extraction pipeline (curl_cffi, BeautifulSoup) with a Next.js 16 CRM dashboard. Implemented TLS fingerprinting for Cloudflare bypass, Greek phonetic transliteration, weighted lead scoring, and sub-millisecond querying with SQLite (better-sqlite3).
- **AI YouTube Shorts Automator – Generative Video Pipeline**: Built an automated media processing pipeline turning long-form content into vertical Shorts using FastAPI, Next.js 15, and FFmpeg. Orchestrated Google Gemini AI for semantic hook extraction, OpenAI Whisper for word-level speech transcription, and a custom FFmpeg/Pillow compositor for karaoke overlays.
- **AviationTracker – Real-Time Flight Radar Platform**: Developed a real-time flight tracking web app using Next.js 15 and React-Leaflet to render geospatial trajectories. Integrated external aviation REST APIs with local caching, computing dynamic distance remaining and real-time ETAs via client-side Haversine formula algorithms.
- **CVCalculator – Cardiovascular Clinical Risk Assessment Tool**: Engineered an interactive clinical decision-support tool implementing logarithmic multivariable regression models to evaluate 10-year CVD risk. Programmed gender-stratified biostatistical equations with React and Tailwind CSS for rapid point-of-care patient evaluation.

Programming Skills

- **Languages**: PHP, Python, JavaScript, TypeScript, SQL, C, C++, HTML5, CSS3
- **Frameworks**: Laravel, React, Next.js, FastAPI, Node.js, Express, Tailwind CSS, Dropzone.js
- **Databases & Tools**: MySQL, PostgreSQL, Redis, Memcached, SQLite, RabbitMQ, Docker, Nginx, FFmpeg, Git, Linux