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Nick Petalas

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Employment

Founder & Lead Engineer **DailyGoal.fit** **Feb 2025 - Present**

- Founded and led the development of a health and fitness tracking platform focused on simplicity, consistency, and meaningful user outcomes.
- Defined the product vision and oversaw all aspects of engineering, UX design, and long-term roadmap planning.
- Designed and implemented a scalable full-stack architecture using Next.js, React 19, Supabase, AWS, and Vercel.
- Built core features such as food logging, goal tracking, and barcode scanning with integrations like USDA FoodData Central and OpenFoodFacts.
- Designed the database schema to support efficient querying, user-specific goal logic, streak tracking, and historical analytics.
- Developed CI/CD workflows and infrastructure automation to enable rapid iteration and high availability.
- Led user research, customer support, and iterative product improvements based on feedback.
- Drove growth strategy, marketing initiatives, and early-stage community building.

Senior Software Engineer **Genesis Global Technology LTD** **Dec 2019 – Oct 2024**

- Core web platform team member and Technical Lead for the “Learn” team.
- Architected and built multiple web platform iterations, transitioning from legacy Angular to StenciJS, then to Microsoft FAST with custom web components and design systems.
- Mentored developers, onboarded new starters, and provided tier 3 support.
- Contributed to Genx CLI, low-code tools, app seeds, and custom Docusaurus plugins.
- Occasional DevOps work (AWS Amplify, GitHub pipelines, IaC).

Software Engineer **Elemental Concept LTD** **Sep 2018 – Dec 2019**

- Full-stack engineer across multiple projects:
- CorResilience: health coaching app with lab and Fitbit integration.
- WellteQ: wellness app (Ionic, Cordova, Node.js, Java, MySQL, MongoDB).
- Gift & Go: B2B rewards platform (Java 11, Spring Boot, Angular, AWS, Docker, microservices). Led refactoring, microservice extraction, performance optimization, API development for clients incl. Scientific Games.
- Go Fast: internal rapid prototyping toolset (Angular 7, NestJS).

Software Engineer **Enigma Software Solutions LTD** **Feb 2017 – Sep 2018**

- Built and maintained tools for online betting clients: client portals, payment systems, trader and bet management, reporting, and retail cashier systems.
- Focused on Java and SQL back-end development.
- Maintained legacy systems (PrimeFaces, Oracle WebLogic).

Software Engineer **Safemarket LTD** **Dec 2014 – Oct 2016**

- Designed and developed internal tools and knowledge extraction systems for the Erybo project (Java, SQL, RDF, Jsoup, Selenium, Apache Jena).
- Built automated media processing tools (Java, ffmpeg), trivia content generators, and entity parsers.
- Developed services and parts of the Quizedia Android app.
- Trained and supervised interns in scraping and quiz generation.

Education

Thessaloniki, Greece **University of Macedonia** **Oct 2012 – Oct 2015**

BSc In Applied Informatics. Final Grade: 7.7 / 10
Thesis: A study on Optimization of Object-Oriented Design using Genetic Algorithms.
Grade: 10 / 10; Supervisor: Alexander Chatzigeorgiou.

Other Technical Experience

I'm proficient across Windows, macOS, and Linux, and prefer working in the command line whenever possible. I have a strong personal interest in systems architecture, networking, filesystems, databases, and automation. I'm continuously learning and exploring new technologies through hands-on personal projects.

Selected Projects:

- **Homelab**: Built and maintained a Proxmox-based homelab running multiple VMs, including:
  - **TrueNAS VM** with HBA passthrough for an 8-drive **RAIDZ2 NAS**.
  - **Debian VM** running dockerized services: Traefik, Plex, Radarr, Sonarr, Lidarr, SABnzbd, qBittorrent, Filebrowser, Glances, Netdata, Home Assistant, and more.
  - Managed my own network stack: OPNsense router (on N100 box), Pi-hole for DNS-level adblocking, Unbound as recursive resolver, and Omada SDN Controller for access point management.
- **Heuristic Vector Image Generator**: Created a genetic algorithm to recreate images using layered semi-transparent polygons. Developed in Java (multithreaded), with an in-progress **Rust rewrite using portable SIMD**. A web-based version is available at artgen.xyz.
- **FreeCell Solitaire Solver**: Wrote a solver for FreeCell puzzles using custom heuristics and graph traversal algorithms (BFS, DFS, A*, Best-First). (Java)
- **Banknote Authentication**: Designed a neural network in MATLAB to classify banknotes as genuine or forged, achieving 100% accuracy on a UCI dataset.
- **Custom Database Merger**: Built a system to augment a large RDF database (based on Freebase) by scraping websites, performing entity recognition (OpenNLP), and fact extrapolation. (Java, MySQL, RDF)
- **BTC Risk Metric**: Developed a custom Bitcoin risk oscillator, combining metrics like EMA ratios, RSI, Mayer Multiple, Puell Multiple, and others to assess cyclical risk. Published as a TradingView indicator.
- **OpenSCAD Modeling**: Created programmatic 3D models for printing using OpenSCAD, combining scripting with parametric design.
- **Auto Conf Scripts**: Maintained a cross-platform setup automation suite for Linux/macOS. It installs hundreds of dependencies, patches fonts, configures zsh, clones repos, and links dotfiles to streamline new machine provisioning.

Programming Languages

- **Primary focus**: TypeScript / JavaScript (frontend & backend), HTML, CSS, Bash (scripting), Dockerfiles.
- **Previously used professionally**: Java, Kotlin, Python, SQL.
- **Limited experience**: C, C++, R, PHP, MATLAB, SPARQL.
- **Currently learning**: Rust and Elixir.
- Always eager to learn new languages and adapt to different ecosystems.