

George Mastrogriannis

+30 690-786-1019 | giorgos_M000@hotmail.com | [linkedin.com/in/geomas](https://www.linkedin.com/in/geomas) | github.com/Je0Dev

EDUCATION

University of Peloponnese
B.Sc. in Electrical & Computer Engineering

Patras, Greece
Sept. 2023 – Present

PROJECTS

IMDb Clone Desktop App | *Java, JavaFX, Maven, Jackson, JUnit*

Jan 2026 – Jun 2026

- Architected a **Java 21/JavaFX** app with layered MVC – FXML views, service layer, in-memory repository implementations – using thread-safe collections (**ReentrantReadWriteLock**, **CopyOnWriteArrayList**)
- Implemented **PBKDF2-HMAC-SHA256** password hashing (10,000 iterations, **SecureRandom** salt, constant-time comparison) with login-attempt throttling (5 tries / 15 min) and 30-minute session timeouts
- Built a factory-driven data-loader pipeline parsing **comma-delimited TXT datasets** with duplicate/error tracking, plus multi-criteria search (title, genre, year, rating) and per-user **1.0–10.0 ratings** persisted via Java serialization

Local Student Database System | *C, POSIX Threads, Make*

Jan 2026 – Jun 2026

- Engineered a thread-safe **C** CLI database running **3 concurrent POSIX-thread services** – 30s auto-save, 5-min backup rotation, 60s statistics monitoring – coordinated by dedicated mutexes (db, log, backup) with signal-based graceful shutdown
- Implemented department-scoped **role-based access control** via bitmask permissions, multi-role authentication, audit logging of security-sensitive operations, and input sanitization
- Built linked-list persistence with timestamped backup rotation, **CSV import/export** with duplicate/validation checks, and 4 search modes including **POSIX-regex** partial-name and case-insensitive name matching

Simple Task Manager | *C, POSIX Threads, Make*

Nov 2025 – Jun 2026

- Built a **C** CLI task manager with a **pthread_mutex_t**-protected task list and a background save thread that persists tasks to a pipe-delimited file without blocking the UI
- Implemented a **task dependency graph** with completion validation (user-overridable), self/duplicate-dependency prevention, and automatic dependency re-indexing on task deletion
- Added **qsort** multi-criteria sorting (name, priority, due date), full-text search over descriptions and notes via a function-pointer traversal, and toggleable ANSI color output

Personal ATM System | *C, Make, File I/O*

Aug 2025 – Jun 2026

- Programmed a secure CLI **ATM** system featuring rigorous **PIN** authentication, privileged administrator modes, and highly reliable file-based data persistence
- Architected a modular codebase utilizing separate compilation units for transactions, UI, and account management to maintain strict separation of concerns
- Streamlined compilation and system deployment utilizing a custom **Makefile**, delivering end-to-end workflows for deposits, withdrawals, and balance management

SKILLS

Languages & Architectures: C, C++, Python, Java, SQL (MySQL), JavaScript, MATLAB/Octave, MIPS, 8085 Assembly, LaTeX, Bash

Hardware & EDA: AutoCAD, LTspice, Multisim, ESP32, Raspberry Pi, Arduino, PlatformIO, Tesseract OCR

Frameworks & Libraries: React, Node.js, Flask, Tailwind CSS, Framer Motion, JavaFX, JUnit, NumPy, Matplotlib

Tools & Cloud: Git, Docker, Firebase, Packet Tracer, Visual Paradigm, VS Code, IntelliJ, Linux (Arch/Fedora)

Languages (Spoken): Greek (Native), English (C2), German (B2), Chinese (A2)