William Alexakis

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Education

St. Catherine's British School (England & Wales Curriculum), Athens, Greece
- Expected graduation: 2028
- Relevant coursework: GCSE Computer Science (completed one year early; Grade 9), Mathematics (Extended), Physics (Triple Award)
- Planned: IB Computer Science HL, Mathematics AA HL, Physics HL

Technical Skills

Languages: C, Python, Bash/Zsh, HTML/CSS/JavaScript
Tools & Frameworks: Git, CMake, Django, PostgreSQL
Systems & Infrastructure: Linux/Unix, POSIX APIs, Cloudflare, Render, Azure AD
Areas of Interest: Systems programming, compilers & interpreters, backend architecture

Projects

Phase — Custom Interpreted Programming Language · Aug 2025 — Dec 2025
C, CMake
- Designed and implemented a statically-typed interpreted language with a custom bytecode VM.
- Built a modular compiler pipeline (lexer, parser, type-checking, bytecode generation, execution).
- Added detailed error reporting, debugging tools, and a clean architecture for extension.

StCats Ops — Full-Stack Internal Admin Platform · Oct 2025 — Present
Python, Django, PostgreSQL, HTML/CSS/JS, Azure AD, Render
- Built a full-stack platform for the school CS department for scheduling, code testing, and administrative workflows.
- Integrated Azure AD SSO, RBAC, invite-based onboarding, and an administration dashboard with custom actions and audit logs.
- Developed a browser-based Python execution environment using Pyodide and Monaco for staff to write and run code through the platform.

Void Shell — Custom Unix-Style Shell · Nov 2025 — Nov 2025
C, CMake, POSIX APIs
- Implemented a compact Unix shell with a recursive-descent parser and POSIX execution model.
- Added pipelines, redirection, sequential execution, and minimal builtins aligned with Unix composition.
- Created debugging commands to inspect parsing and execution flow.

Achievements & Awards

- Completed GCSE Computer Science one year early with Grade 9
- 1st Place, Line Robot Competition at StCatsHacks (2023, 2024, 2025) as lead programmer

Extracurricular Activities & Leadership

Computer Science Department — Student Software Engineer · Oct 2025 — Present
- Build and maintain internal tools for the department, including StCats Ops.

STEM Racing Team — Software Engineering Member · Nov 2025 — Present
- Develop official website and write Python scripts to process and analyze CFD simulation output for aerodynamic optimization decisions.

Additional Info

- Languages: English, Greek
- Interests: Creative writing, geopolitics, economics & finance, history, swimming, skiing