

William Alexakis

Athens, Greece

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GitHub: github.com/williamalexakis

Portfolio: williamalexakis.com

Blog: williamalexakis.com/blog

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

C, C++, Python, Git, Linux/Unix

Projects

Phase — Bytecode-Interpreted Programming Language (Aug 2025 — Dec 2025)

github.com/williamalexakis/phase

williamalexakis.com/blog/posts/writing-phase

- Designed and wrote a statically-typed programming language in C17 supporting functions, conditionals, loops, tuple destructuring, 5 primitive types, and a 25-opcode stack-based virtual machine (~4,800 LOC; no external dependencies).
- Engineered a full compilation pipeline featuring a handwritten lexer, recursive-descent parser, static type-checker, bytecode generator, and a stack-based virtual machine executor with scoped call frames.
- Implemented 21 error types with source-mapped diagnostics displaying exact file/line/column, visual markers, and diff-style fix suggestions.

Achievements & Awards

- Completed GCSE Computer Science one year early with Grade 9
- 1st Place in Line Robot Competition at StCatsHacks for 3 consecutive years (2023 — 2025) as lead programmer

Extracurricular Activities

STEM Racing Team 'Thaton Motorsport' — Software Engineering Member (Oct 2025 — Present)

- Wrote Python script to compute uncertainty metrics (standard deviation, range, variation coefficient) from CFD simulation data and generate visualisations for aerodynamic optimisations.

Additional Info

- Languages: English, Greek
- Interests: Writing, geopolitics, swimming, skiing