

# WILLIAM ALEXAKIS

Athens, Greece

[w.alexakis@icloud.com](mailto:w.alexakis@icloud.com) | [github.com/williamalexakis](https://github.com/williamalexakis) | [williamalexakis.com](https://williamalexakis.com)

## EDUCATION

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**St. Catherine's British School**

Athens, Greece

**International Baccalaureate Diploma Programme (Expected)**

September 2026 — July 2028

Computer Science HL, Mathematics Analysis & Approaches HL, Physics HL

**IGCSE Programme**

September 2024 — July 2026

Computer Science (Grade 9), Mathematics Extended, Physics Triple Award

## TECHNICAL SKILLS

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

## PROJECTS

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**Phase | Bytecode-Interpreted Programming Language**

August 2025 — December 2025

[github.com/williamalexakis/phase](https://github.com/williamalexakis/phase)

[williamalexakis.com/posts/writing-phase](https://williamalexakis.com/posts/writing-phase)

- Designed and wrote a statically-typed programming language in C 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

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- 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

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**Thaton Motorsport | STEM Racing/F1 in Schools Team**

October 2025 — Present

*Software Engineering Member*

- Wrote Python script to compute uncertainty metrics (standard deviation, range, variation coefficient) from CFD simulation data and generate visualizations for aerodynamic optimizations.
- Built and deployed team website using HTML/CSS and Cloudflare Pages.

## ADDITIONAL INFORMATION

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Languages: English, Greek

Interests: Writing, geopolitics, skiing