ALEX CONSTANTIN-GÓMEZ

Penultimate year Computing student looking for 5–6 month software engineering placements

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EDUCATION

Imperial College London   *2019 – 2023*
Master of Engineering - Computing   *London, UK*

- First class grade in both 1st and 2nd years (equiv. to 4.0 GPA), including programming modules and coursework.
- Received the *Solidatus Award for Excellence in Software Engineering* in 2nd year, from a cohort of 190 students.

Kensington Aldridge Academy   *2016 – 2018*
Sixth Form   *London, UK*

- Five A* grades at A Level in Maths, Further Maths, Computer Science, Physics and Spanish.

EXPERIENCE

Bloomberg   *July – September 2021*
Software Engineer Intern   *London, UK*

- Created an end-to-end behaviour-driven testing framework from scratch for an FX order book trading platform.
- The framework covers the entire trading workflow with 16 different test scenarios, and is easily extensible for future growth. Implemented in **Python** and **Gherkin** following Agile methodology.
- Debugged and optimised the memory usage of a **C++** backend service using smart pointers.

PROJECTS

Linux Debugger
- Implemented a command-line debugger for x86-64 ELF binaries on Linux, similar to GDB.
- Supports software breakpoints, line & function stepping, source-level debugging and variable inspection.
- Written in C++ using Unix-based system-level APIs such as `ptrace`, and a DWARF parsing library.

WACC Compiler
- Developed a compiler for a simple statically-typed imperative language which generates ARM assembly.
- The language supports simple classes, functions, loops, conditional statements, arrays and generic types.
- Written in Scala using test-driven development and a CI pipeline, in a team of four students.

Pintos Operating System
- Implemented the core components of an OS kernel targeting the x86 architecture.
- Supports multi-threading/scheduling, running user programs, system calls and virtual memory using paging.
- Written in C with three other team members, with detailed documentation and extensive test cases.

Mediochat: Online video appointments
- Developed a web app that allows doctors to make online video appointments with their patients.
- Supports email notifications for patients, a friendly UI and a detailed appointments dashboard for doctors.
- Implemented using Express, NodeJS, web sockets and Firebase, with Bootstrap on the frontend.

TECHNICAL SKILLS

Programming Languages - Python, Java, C, C++, Go, JavaScript.
Technologies/Tools - Git, Linux/Unix, GDB, Docker, Gitlab CI/CD, Firebase, PostgreSQL, Redis.

OTHER

- Often participates in coding workshops and watches online programming talks/conferences.
- Native Spanish speaker and currently learning Arabic.
- Occasionally teaches A Level and GCSE maths as a private tutor.

References are available on request