

# Alba Navarro Rosales

**learn. explore. create.**

Second year Computer Science student at the University of Cambridge interested in Computer Graphics, Games Development, Software Engineering and Front-End Web Development.

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## Education

### University of Cambridge • BA (Hons) in Computer Science

October 2019 - present (graduation in 2022)

Predicted grade: **1 (First class)**

Relevant courses taken:

- Introduction to graphics
- Further graphics
- Programming in C & C++
- OOP (Java)
- Algorithms
- Mathematical Methods (including matrices, vectors & linear algebra)
- Software and Security Engineering

### The British School of Córdoba • A-Levels & IGCSEs

September 2004 - June 2019

A-Levels: **A\*A\*A\*A\*B** - Computer Science, Mathematics, Further Mathematics, Physics, Spanish, Art and Design.

Awards: CIE Highest Grade in Spain for Computer Science and Physics AS Levels (June 2018). CIE Highest Grade in Spain for Co-ordinated Sciences IGCSE (June 2017). CIE High Achievement for Music IGCSE (June 2016)

## Projects & Experience

### OpenGL Renderer in Java • Personal Project

August 2020 - Present

Created a scene renderer (rasterizer) OpenGL application from scratch in Java using the LWJGL library to access the OpenGL API. Further details, features implemented and code [here](#) (GitHub).

### Ray tracer in Java • Introduction to Graphics Assignment

November 2019

Implemented a ray tracer in Java. Uses the Phong illumination model and handles reflections. Code and details [here](#) (GitHub).

### Lexical Analyser & SLR compiler in Java • Project

August 2020

Implemented a lexical analyser and SLR parser for a 'calculator' application. Scans a given input string and outputs a parse tree for the expression in the given grammar. Code and details [here](#) (GitHub).

### Google Hash Code 2020 • Competition

February 2020

Presented a solution to a software engineering optimisation problem using Python. Worked in a team of 3 and finished 2218 out of 10724 globally. Code [here](#) (GitHub).

## Skills

### Programming

Java, Python, OCaml, HTML, CSS, familiar with JavaScript. OpenGL API & LWJGL.

### Tools

Git for version control.

### Languages

English - bilingual proficiency  
Spanish - native  
French - DELF B2 91% (Feb 2019)

## Other Skills

**Scout** - Teamwork & leadership skills. Tackling new challenges. Problem solving. Perseverance.

**Debate** - Successfully participated in academic debate tournaments. Analytical and critical thinking. Great communication skills.

**Art & Graphic Design - Head of Design for Hack Cambridge Hex**, the 6th edition of Cambridge's biggest hackathon. Responsible for the creation of brand, logo & web design, organising swag. (April 2020 - present)

**Music** - Creativity. Dedication. Professional Music Qualification for Flute (Professional Music Conservatoire, Córdoba- September 2009 - June 2019)

**Badminton** - Newnham team player for the intercollegiate league. Member of the University team's Development Squad.