

# Jonathan Alexander Carrillo Cortés

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[github.com/joacarrilloco](https://github.com/joacarrilloco)  
C++, TypeScript, C, Java, Kotlin, JavaScript

## Education

- National University of Colombia
- B.Sc. Systems and Computing Engineering
- Expected graduation date: December 2022
- Cumulative GPA: 4.5 / 5.0

## Work Experience

July 2020 – April 2021

Junior Back-end Developer | [Valiu](#)

- Increased the monthly active users by 20% by improving the referral system and the promo-code campaigns implementing improvements on TypeORM microservices.
- Decreased the average cost per transaction by 10% by the development of a microservice in TypeORM capable of executing instant transactions from Colombia to Venezuela.

## Major Projects

Programming Languages ( Jun – Jul 2021 )

Bash 2 Bash | Java [\(Repository\)](#)

- Developed API tool that aims to execute translations of the most common Unix commands to the most common Windows-DOS commands using ANTLR for the language processing.

Software Architecture ( Jul – Dec 2019 )

Taurus [\(Repositories\)](#)

- Mobile and web multiplayer maze game developed under a microservices architecture using Spring-Boot, GraphQL and React-Redux.
- Implemented a procedural maze generator in Kotlin using Kruskal's algorithm.

Operating Systems ( Jun – Jul 2019 )

POSIX Information System | C [\(Repository\)](#)

- Low-level client-server platform developed using C POSIX library.
- Used hashing, multi-threading and parallel computing to improve server concurrency and performance supporting up to 10 Million registers.

Personal Project

Geometry Template | C++ [\(Repository\)](#)

- Geometry template that processes points, segments, lines, circles, triangles and polygons. Implemented operations over those objects such as constructions, intersections, inclusion tests and classical computational geometry algorithms.

## Awards & Other Activities

- Champion at ICPC National Contest in 2018 and 2019
- Sub-Champion at the 2019 ICPC Latin America Programming Contest among 383 teams
- **Finalist at the 2020 ICPC World Finals**
- Team Coach at the Competitive Programming group of my University, this involves the organization of lectures on algorithms and data structures and a continuous guidance to new members and teams that are going to represent the University