

# Carlos Orozco

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## OBJECTIVE

An internship or research position that will allow me to apply my skills and knowledge to an area of computer science that will further the development of my abilities

## EDUCATION

**University of Illinois Urbana-Champaign**  
Bachelor in Computer Science and Linguistics

**Expected Graduation: May 2025**  
GPA: 3.11/4.00

## EXPERIENCE

### CS 124

*Course Assistant*

**Downers Grove, IL**

*August 2022 – Present*

- Spent several hours a week assisting students in the course by further teaching them the fundamentals of programming and computer science
- Substantially deepened my own understanding of concepts by helping others

## INVOLVEMENT AND LEADERSHIP

### ACM SIGMobile Interest Group | *Member*

- Learned high level mobile app development by attending weekly meetings and completed projects and problems through the open source framework Flutter

### Phi Delta Theta | *Head Recruitment Chair*

- Organized recruitment events, and reached out to hundreds of students informing them of the academic, social, and professional opportunities our fraternity offers

### Glenbard East Math & Coding Tutor | *Tutor*

- Supported students who struggled with work in Algebra, Geometry, Pre-Calc, and AP Computer Science

## PROJECTS

### Discord Tic-Tac-Toe Bot | *Javascript*

- Coded a responsive bot in Discord that interacted with users on the server by playing a game of tic-tac-toe
- Created a SQLite database to keep track of the all time score between an individual user and the bot

### Mosaic Image Generator | *C++*

- Created a program that took a source picture, divided it up into rectangular sections, and replaced each section with a small thumbnail image whose color closely approximates the color of the section it replaces
- Utilized a 3-D tree (a 3-dimensional k-d tree) to find the closest average color to the average color of pixel sections in the source image

### Random Maze Generator | *C++*

- Created a program that generated random mazes, with and without the solution, and returned the solution as a vector of directions from the origins
- Utilized disjoint sets to create the walls and structure of the maze

### OpenFlights | *C++*

- Created a graph structure using airport data from the OpenFlights database
- Wrote an algorithm to determine the shortest path between any two airports
- Configured the algorithm to support the finding of a path between airports, while enforcing stops at custom landmarks

## SKILLS + COURSEWORK

**Languages:** Java | Python | C++ | Javascript | Some HTML and CSS | Spanish

**Technologies:** Git, Github | Visual Studio Code

**Courses:** CS 124: Intro to Computer Science, CS 128: Intro to Computer Science II, CS 173: Discrete Structures, CS 225: Data Structures, MATH 225: Matrix Theory, MATH 221: Calculus I, MATH 231: Calculus II

