

# Adam Sadek

Third Year Computer Science Major at Illinois Institute of Technology

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## Expertise

Java  
Python  
SQL  
Video Editing  
MAC Systems  
Google Apps

## Programming Experience

Java  
Python  
Assembly Code  
Haskell  
SQL  
C  
HTML & CSS

## Interests

### Database Design

I enjoy designing entity relationship diagrams, relationship schemas, and data definition languages for databases. Learning relational algebra and POSTGRESQL has advanced my knowledge in database management systems.

### Basketball

Basketball has been my favorite sport since I was 5 years old. I played all through high school and was a Division III men's basketball player at Illinois Institute of Technology.

## Experience with Artificial Intelligence

### COM-IoT Technologies

From 05/20/2022 to 08/31/2022 I interned with COM-IoT, a Dubai-based artificial intelligence company. During my time there, I learned about how data collected by sensors mounted to a vehicle can be utilized by machine learning algorithms to help traffic control protect lives through better traffic violation detection. In addition to LiDAR research assignments, I worked on developing the intelligence's knowledge base by annotating over 1,200 point cloud data frames made by a LiDAR. I identified traffic objects such as cars, trucks, buses, pedestrians, motorcycles, and more. Learning about how software engineers build machine learning algorithms to identify objects and the speed of moving vehicles reinforced in my mind the potential for artificial intelligence and machine learning to make the world a safer place.

## Experience with Circuit Board Design

### Xprize Rainforest Competition

In the Fall 2022 academic semester, I was part of an interprofessional competition called the Xprize Rainforest. Teams in this competition are tasked with developing a solution to collect as much data as possible in 24 hours about the wildlife in the Singapore rainforest. Our team's solution included drones that would drop sensor packages around the rainforest. The drone had to be equipped with motors to control the latches that would drop the sensor packages, a microprocessor to program the drone components, a motor driver to control the motors, and voltage converters to provide the motors with sufficient voltage. My partner and I combined all of these components into one printed circuit board. This process included designing the schematic and printed circuit board, programming the microprocessor, and manufacturing the board.

## Academic Awards

### Highschool - Dubai American Academy

#### Certificate of Achievement High Honors with Distinction (GPA of 4.0 or above)

I achieved this award every semester of 11th and 12th grade and once in the first semester of 10th grade. This certificate is a testament to my strong work ethic that I have developed at a young age. To achieve this award I had to excel in my six international baccalaureate courses and regularly perform well on assessments.

### College - Illinois Institute of Technology

#### Dean's List

For all five semesters that I have completed at Illinois Institute of Technology, I have been on the Dean's list. I currently maintain an overall GPA of 3.968 and I expect to improve my GPA in the future. Academic discipline and a strong work ethic have always been strengths of mine.

## Projects

SQL Banking  
System  
Database

LiDAR Point  
Cloud Data  
Frames

Assembly  
Language  
Calculator

C & Linux  
Benchmarking and  
Memory Hierarchy

Java Music  
Playlist  
Program