

# SPIRE-EIT 2024



SUMMER PROGRAM FOR INTERDISCIPLINARY RESEARCH AND EDUCATION – EMERGING INTERFACE  
TECHNOLOGIES



## 2nd of August

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August 2, 2024



Chukwuma Maduwuba

Last day

Today marks the final day of my REU (Research Experiences for Undergraduates) program, and it's a bittersweet moment. Over the course of this program, I've learned a tremendous amount, from advanced research techniques to effective collaboration strategies. The experience has been incredibly enriching, both academically and personally.

I've had the opportunity to work alongside and learn from brilliant minds, both peers and mentors, who have inspired and challenged me every step of the way. The connections I've made and the friendships I've formed have been a significant highlight, making the journey even more memorable.

As I reflect on this experience, I'm filled with gratitude for the knowledge gained, the skills honed, and the wonderful people I've met. This REU program has truly been a pivotal chapter in my academic journey, and I'm excited to carry forward all that I've learned into my future endeavors.



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## July 8th

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July 8, 2024



Chukwuma Maduwuba

## CRAFTS OF RESEARCH

Today was a day filled with discovery and learning, kicking off with an enriching session on the "Crafts of Research." The morning was dedicated to honing our skills in presenting research posters, a crucial aspect of sharing and communicating scientific findings effectively.

# Presenting a Research Poster: Reducing Heat Morbidity in Lower-Income Societies

During the session, we focused on a compelling and urgent topic: “How to Reduce Heat Morbidity Rates in Lower-Income Societies.” As global temperatures continue to rise, heat morbidity has become a significant public health concern, particularly in lower-income areas where access to cooling technologies and healthcare may be limited.

We learned various strategies for creating an impactful research poster, including:

1. **Clear and Concise Messaging:** Keeping the information straightforward and avoiding jargon to make it accessible to a broader audience.
2. **Visual Appeal:** Using graphs, charts, and images to convey data and make the poster visually engaging.
3. **Logical Flow:** Ensuring that the information is organized logically, guiding the viewer through the research question, methodology, results, and conclusions.
4. **Engagement:** Preparing to answer questions and discuss the research in more depth with interested viewers.

## Questions and Curiosities

I left the session with several questions buzzing in my mind:

- **For the Curiosity EEG Group:** How do you plan to integrate EEG technology into everyday classroom settings? What challenges do you foresee in terms of accessibility and affordability?
- **For the STEM XR Group:** How will the game be tailored to different learning styles and age groups? What measures are in place to ensure that the content is both educational and entertaining?

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## July 2nd

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 [July 2, 2024](#)  [Chukwuma Maduwuba](#)

So I'm starting from yesterday.

Monday was just working on our deeper dive project which was more than stressful because I had to upload different assets into the VR environment, and it wasn't easy because most of the assets weren't even compatible. Then I had to find new assets to use for the environment, on top of that I still had to edit them because I found out that I had not deactivated a few cameras for the assets, but in the end I got through it and we got 1 step closer to our end goal.

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## June 26th

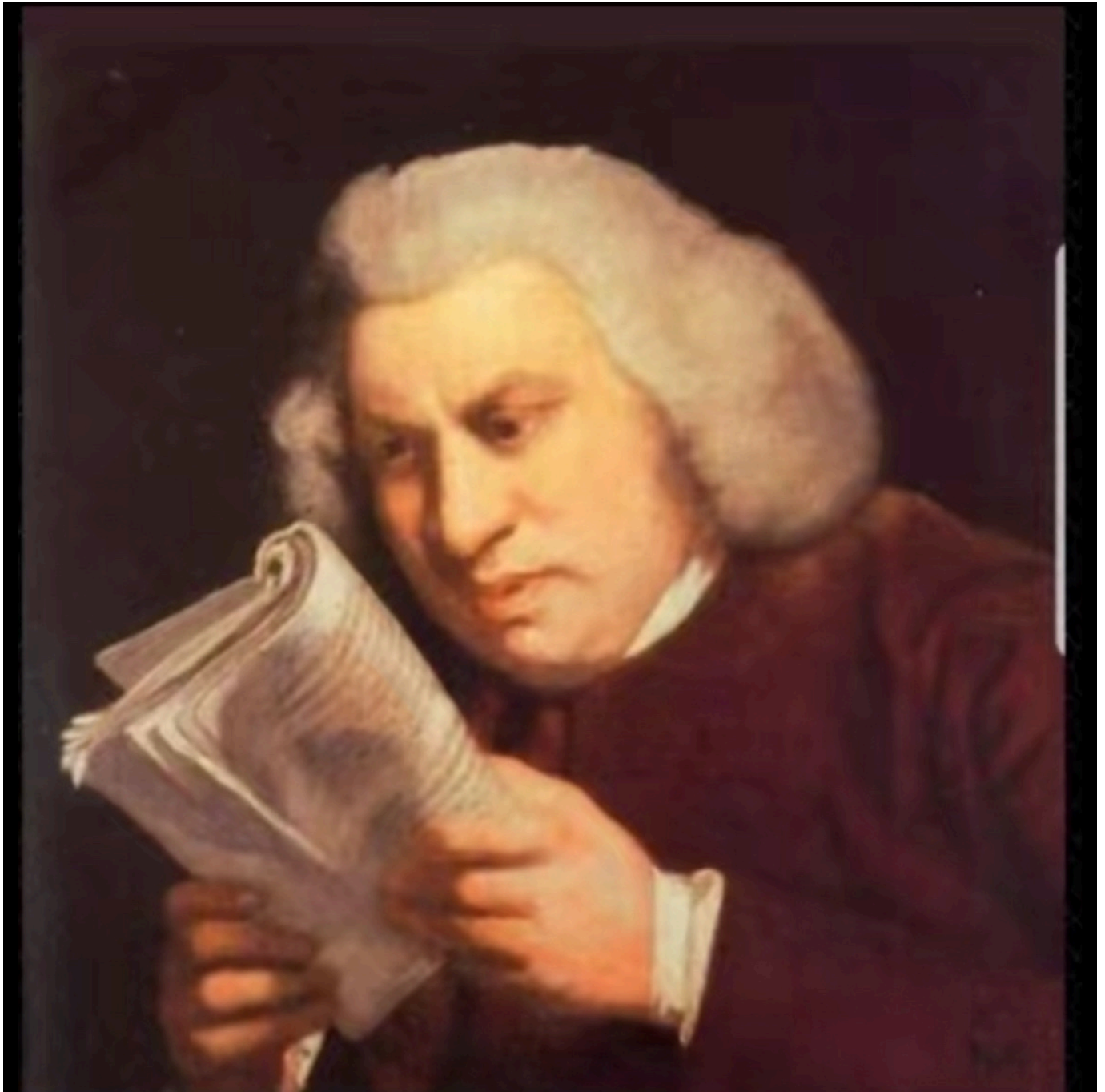
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 [June 26, 2024](#)  [Chukwuma Maduwuba](#)

So for this I'm starting from yesterday.

We had a luncheon lecture from a previous reunion which I actually like because she could actually relate to us to give us experiences she had here and also a few challenges which was very insightful.

Today has been pretty tiring mainly because it was too hot and I couldn't fall asleep the night before. I thought that would be the worst part of my day, and then we had to do our deeper dive topics and the YouTube video we used to guide us was trash, luckily due to hard work and discipline we pulled through and finished the first quarter of our project.



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## June 24th

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 [June 24, 2024](#)  [Chukwuma Maduwuba](#)

Today was mainly deeper dive topics, basically we were discussing our problem statement which changed a lot and that alone was already not to mention that we also kept change the focus of our



project, eventually we came to a decision. We also got to play a few vr games to get some inspiration and luckily that part wasn't stressful. PS it has been unbelievably hot today don't go outside.

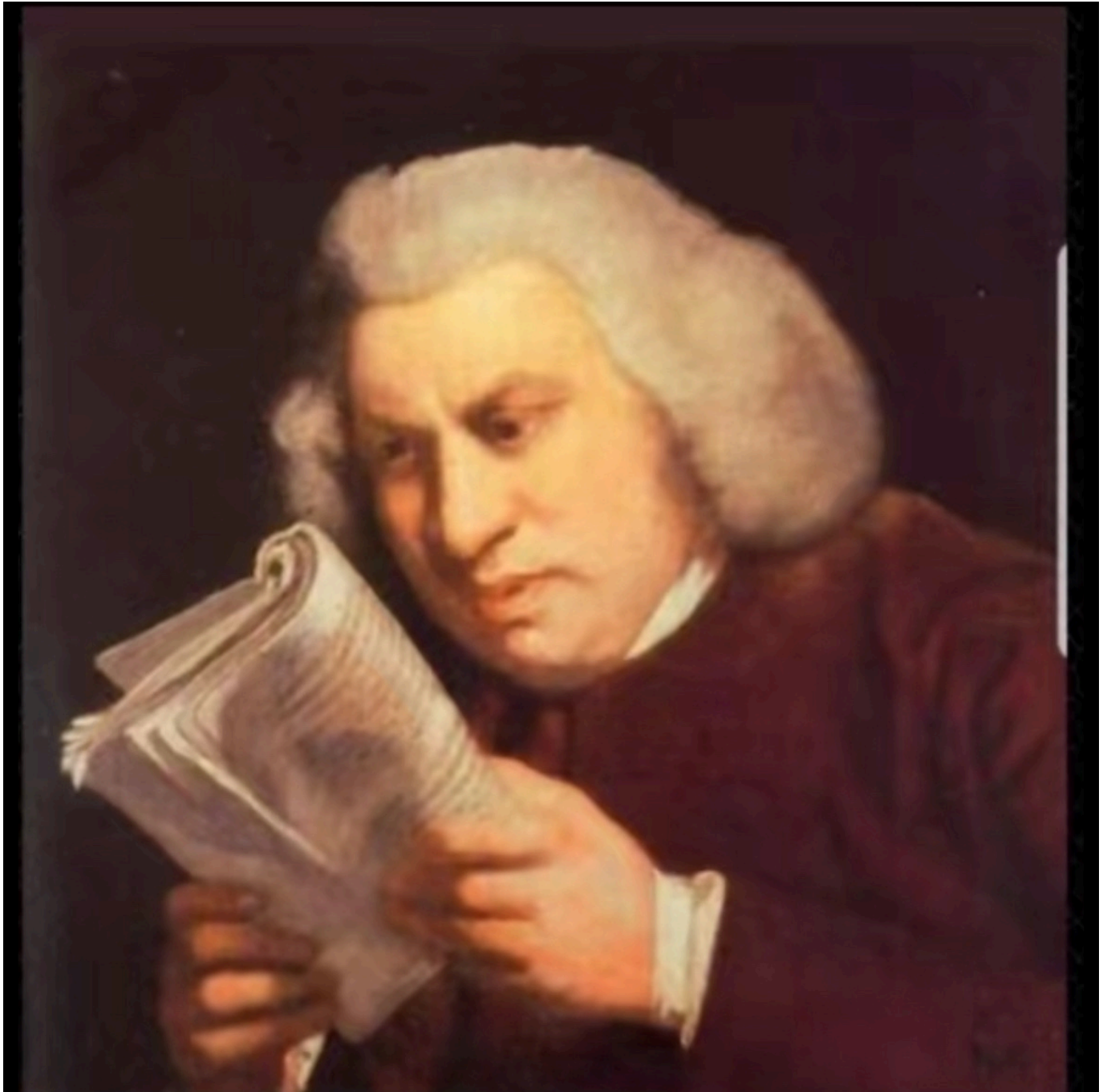
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## June 19th

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 [June 19, 2024](#)  [Chukwuma Maduwuba](#)

Today was programming or blender work in unity, which was very frustrating because it was not easy to do , but I got through it.It also rained and my bike got wet which was also very frustrating. I guess you can say today wasn't such a good day.



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# HCI

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June 17, 2024



Chukwuma Maduwuba

.MAKE REMOTE CONTROLS RECHARGE TO SAVE MONEY ON NEW BATTERIES

.MAKE LIGHT SWITCHES GLOW IN THE DARK TO FIND THEM EASILY AT NIGHT

.MICROWAVES – ADD A MUTE BUTTON TO THE MICROWAVE TO SILENCE THE BEEPING SOUND



Blog Posts

## June 13th

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June 13, 2024



Chukwuma Maduwuba

I'm going to start from yesterday because it was more eventful.

So basically yesterday was assembly in solid works which was actually very interesting mainly because I actually liked it, the task was a little hectic but still very interesting to do. Then we had blender introduction which was not as easy as she said it would be, nevertheless we pulled through, honestly I think blender is more interesting and easier to grasp than solid works.

Today we basically just did HCI which is intro to history and conference which was a lot more interesting than I expected to be and it was kind of cool to know people who attend these conferences.



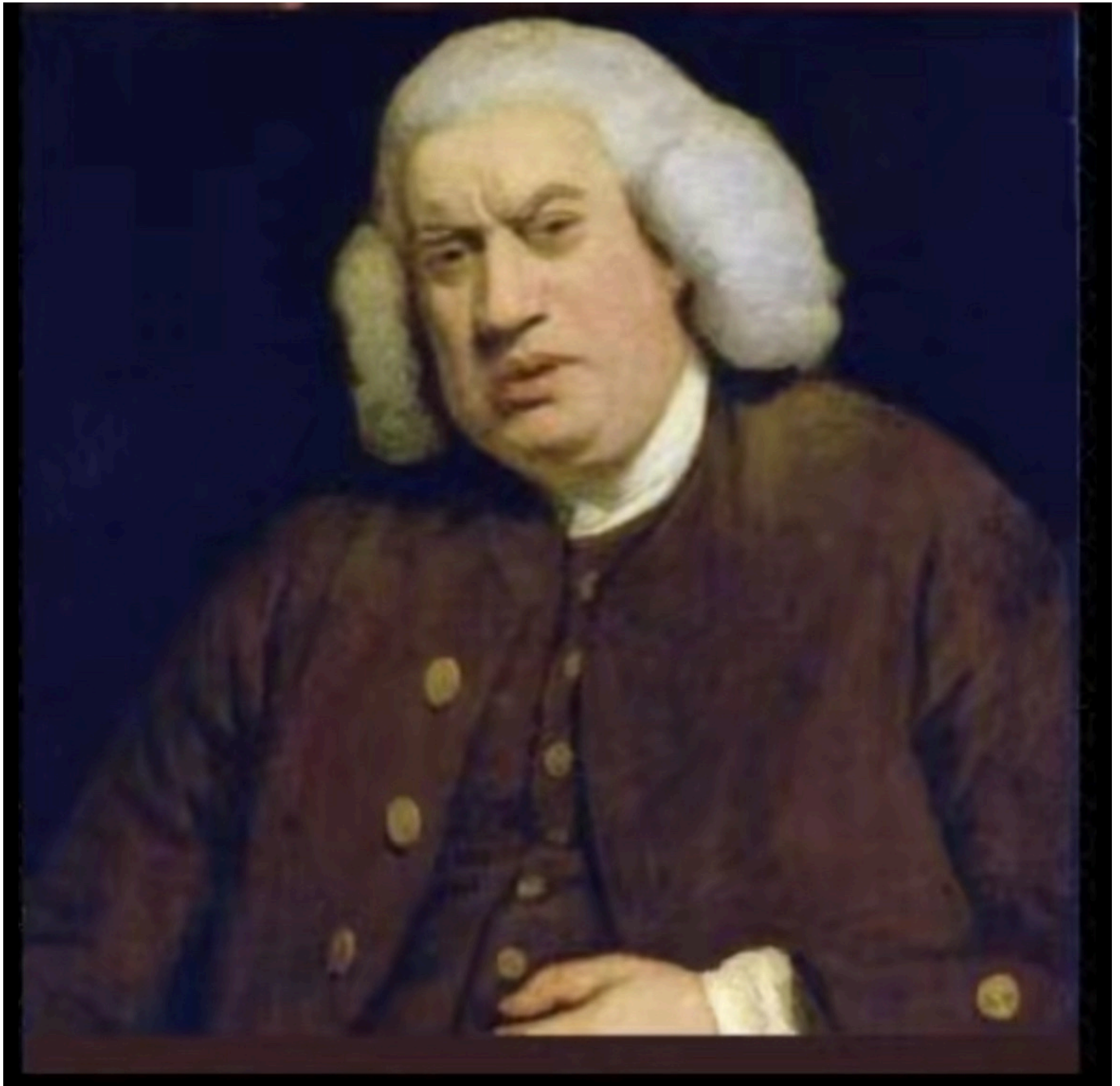
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## June 11th

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 [June 11, 2024](#)  [Chukwuma Maduwuba](#)

This past weekend was pretty eventful, we woke up a little too early for a ropes course which wasn't bad but my fear of heights was not helping. We also attended an Reu get together on Sunday which was actually really fun, we got to meet new people and have a good time.



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## 5th of June

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 June 5, 2024  [Chukwuma Maduwuba](#)

Today was another calm day just did more c++ coding and that's was basically my day in a nutshell she'll



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## 4th of June

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 June 4, 2024  [Chukwuma Maduwuba](#)

Today was an interesting day I almost woke up late but my roommate came to my rescue, I'd like to thank him for that.

Today we had like a speaker who told us about his journey from like high school to where he is now and it was actually very encouraging. He gave us really good tips regrading the job industry and might have also persuaded me to go to grad school.





Ps this is the roommate that woke me up.

# Monday June 3rd



June 3, 2024



Chukwuma Maduwuba

```
1  /// Programming Basics.cpp : This file contains the 'main' function. Program execution begins and ends there.
2  ///
3
4  #include <iostream> // Include the iostream library
5  #include <string>
6
7  int main()
8  {
9
10     int c = 10;
11
12     bool isequaltoten = (c == 10);
13     //int v = 5.52;
14     //bool c = true;
15     //bool d = false;
16
17     // int a;
18     //std::cin >> a;
19     std::cout << isequaltoten << std::endl;
20 }
21
22 /// Run program: Ctrl + F5 or Debug > Start Without Debugging menu
23 /// Debug program: F5 or Debug > Start Debugging menu
24
25 /// Tips for Getting Started:
26 /// 1. Use the Solution Explorer window to add/manage files
27 /// 2. Use the Team Explorer window to connect to source control
28 /// 3. Use the Output window to see build output and other messages
29 /// 4. Use the Error List window to view errors
30 /// 5. Go to Project > Add New Item to create new code files, or Project > Add Existing Item to add existing code files to the project
31 /// 6. In the future, to open this project again, go to File > Open > Project and select the .sln file
```

```
TimeConversion.cpp  Programming Basics.cpp  What's New?  Git Changes
TimeConversion (Global Scope)
1  /// TimeConversion.cpp : This file contains the 'main' function. Program execution begins and ends there.
2  ///
3
4  #include <iostream>
5
6  int main()
7  {
8     std::cout << "enter number: and have a great day" << std::endl;
9
10     float in_seconds;
11     std::cin >> in_seconds;
12
13     int hours = (in_seconds / 3600);
14     int minutes = ((in_seconds / 60) - (60*hours));
15     int seconds = (7645 - (hours * 3600) - (minutes * 60));
16
17     std::cout << in_seconds << " seconds is " << hours << " hours " << minutes << " minutes " << seconds << "seconds";
18 }
19
20 /// Run program: Ctrl + F5 or Debug > Start Without Debugging menu
21 /// Debug program: F5 or Debug > Start Debugging menu
22
23 /// Tips for Getting Started:
24 /// 1. Use the Solution Explorer window to add/manage files
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30
```

- Today I pretty much woke up to breakfast in bed which was cool, my roommate made it by the way.
- Then we began the day with 4 hours of c++, as you can see above.

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2 Replies

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