



The Official Newsletter of the Flight Deck

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Meet the CO-OPs!



Sydney LeBlanc
Product Manager

Hi! I'm Sydney and I'm in my third year of Systems Design Engineering. In my free time, I love to swim; I'm part of the UW artistic swimming team and play inner tube water polo with my intramural team! I'm also training to do my first triathlon this summer!



Ahmed Fawzy
Full Stack Developer

Hello! I'm Ahmed, currently a 2nd year Computer engineering student. You can usually find me on the basketball court, playing chess or video games! My goal for this term is to learn a new software skillset!



Kunal Varkekar
Full Stack Developer

Hey, I'm Kunal! I am a 3rd year Physics and Astronomy major. I'm usually out on a walk or in the gym in my free time. I love playing the piano and reading science fiction books. For this term, I am trying to learn all I can about being a Full Stack Developer.



Yash Patel
Full Stack Developer

Hey! I'm Yash and I'm in my third year of Computer Science. In my free time, I enjoy working out and playing sports such as basketball, soccer and cricket. I also play a ton of video games, especially warzone and rocket league.

A Trip to Greenwood

Sydney LeBlanc, Product Manager



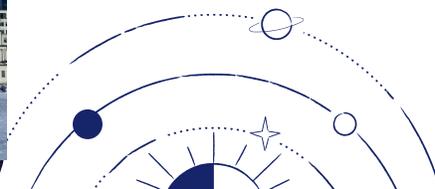
Left to right: Nabiha Aziz, Jasper St Pierre, Piranavan Jéyakumar, Andrew Pohran, David Nguyen, Sydney LeBlanc, Jonathan Loos. Missing: James Carpenter

OVERVIEW

Last week the Hangar team visited 14 Wing Greenwood Air Force base! We went with the goal of learning about their claims workflow in order to deliver value by bringing the entire claims process into Dispatch by the end of the week. We met with various users from the Claims Cell and 413 Squadron to understand how they process claims and to collect feedback throughout the week as we built new features on-site.

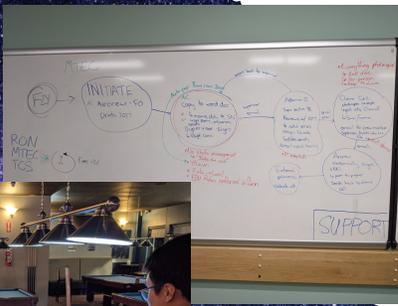
DAY 1:

After arriving in Nova Scotia, we had some time to kill before the rest of our team from Ottawa arrived. So, we decided to do some sightseeing in Halifax! We hiked up to the Citadel, which was free to enter since it was winter and freezing cold. From the top, we got a beautiful view of Halifax. After that, we got in the car for the 2-hour drive to Greenwood!



DAY 2:

The day started with kickoff meetings and introductions to the claims cell team members. We got to learn about their entire claims process, and took note of pain points that we could solve. In the afternoon, we began building features to present the next day. It was also Jasper's birthday, so at the end of the day we went out for some pool and games to celebrate!



DAY 3:

We woke up super early to head over to the 413 Squadron, where we got to observe how they use Dispatch as part of their morning routine. Then, they took us for a ride in the CH-149 Cormorant, which was incredible – we even got to watch the SAR Techs jump out and get hoisted back up into the helicopter! The rest of the day was spent collecting feedback and building out more claims features.

DAY 4:

We presented the claims prototype to the claims cell members, and got their feedback on what we've been working on the past two days! From their feedback, we were back to hard at work making improvements to their claims process! Of course, we still made time for playing ping pong and foosball!



DAY 5:

The final feedback sessions were today, and both the Claims Cell and aircrew were happy with what we've been able to create for them so far. After these meetings, we got to explore a CC-130H Hercules, which was so cool! Due to an incoming snowstorm, we had to leave Greenwood early, so we quickly visited the Air Force museum and headed back to Halifax. We then had a nice team dinner, and spent the evening playing board games!

DAY 6:

As our trip came to an end, we headed back home, luckily not being affected by the snowstorm, except for our car getting stuck!!



THE GREAT DARK MATTER MYSTERY

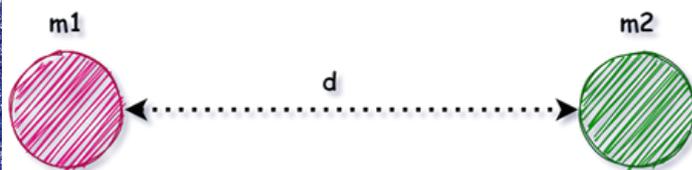
Ahmed Fawzy, Fullstack developer

Estimated Read time: 2 minutes



Introduction:

Picture this: you're a scientist studying the universe, and you stumble across something really weird. You notice that most of the matter in the universe is invisible. Yup, you read that right. Invisible. This mysterious substance is known as dark matter, and it makes up about 85% of the matter in the universe. Crazy, right?



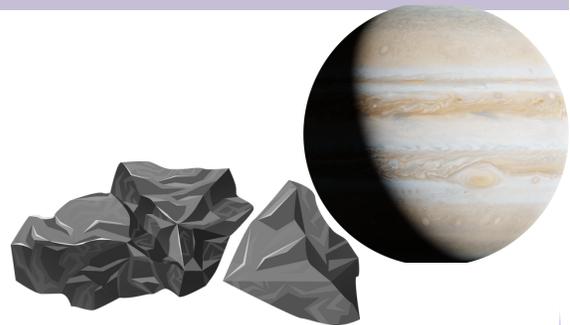
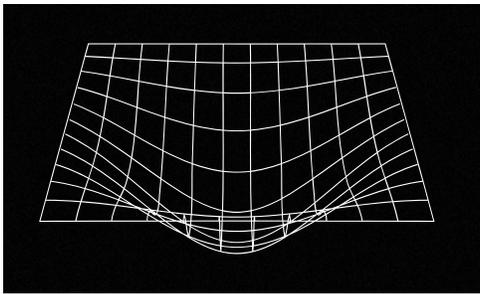
$$F_g = G \frac{m_1 m_2}{r^2}$$

Now, you might be wondering, "How do we even know it's there if we can't see it?" Well, we can tell it's there because of its gravitational effects on other objects in the universe. Mass causes a gravitational pull on any surrounding bodies; this can be modeled using Newton's law of gravitation (shown above). When scientists observed how planets and galaxies rotate they discovered an unaccounted force! Later on, it was then explained that invisible matter had to exist to account for this force. Since it's invisible we know that it doesn't emit or absorb any kind of light, so it's impossible to observe it with current instruments like the telescope. It's like it's playing hide-and-seek with us, and we're losing pretty badly.

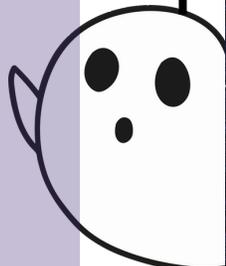
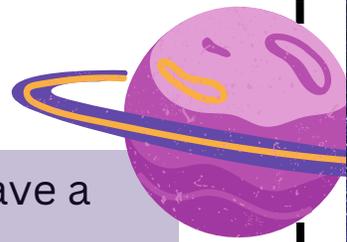
A closer look:

So, what is this elusive stuff made of? Well, scientists have a few theories. One popular theory is that it's made up of particles called WIMPs (Weakly Interacting Massive Particles). Basically, these are particles that don't interact with light but do interact with gravity. Another theory is that dark matter is made up of black holes. Yes, you read that right. Black holes.

As much as we know about it, the hunt for dark matter is far from over. Scientists are still trying to figure out what it's made of and how it behaves. And, they're getting pretty creative in their search. For example, they're using underground experiments to look for WIMPs, or studying the cosmic microwave background radiation (which is like a snapshot of the early universe) to learn more about dark matter.



Now, why does dark matter matter? Well, understanding dark matter is important because it could give us a better understanding of how the universe works as a whole. By figuring out what it's made of and how it behaves, we can learn more about the formation and evolution of galaxies, the structure of the universe, and even the future predictions of the universe itself. So, even though dark matter might seem like a bit of a mystery right now, scientists are working hard to uncover its secrets. Who knows what kind of exciting discoveries they'll make and what type of questions will be answered in the near future!



A Food Review For Trenton

Kunal Varkekar, Fullstack developer

The team had a lot of good food moments and some not so good food moments while in Trenton. However, we for sure had a lot of bonding memories over the food. One of those moments was when we had our team dinner at Gogi Grill, a Korean restaurant.



Everyone enjoyed their food a lot. I had a Chicken Katsu with their special Katsu sauce. They also served us some Kimchi and Miso Soup on the side. The food was fresh and tasted amazing. One of the best Korean places I've tried anywhere!

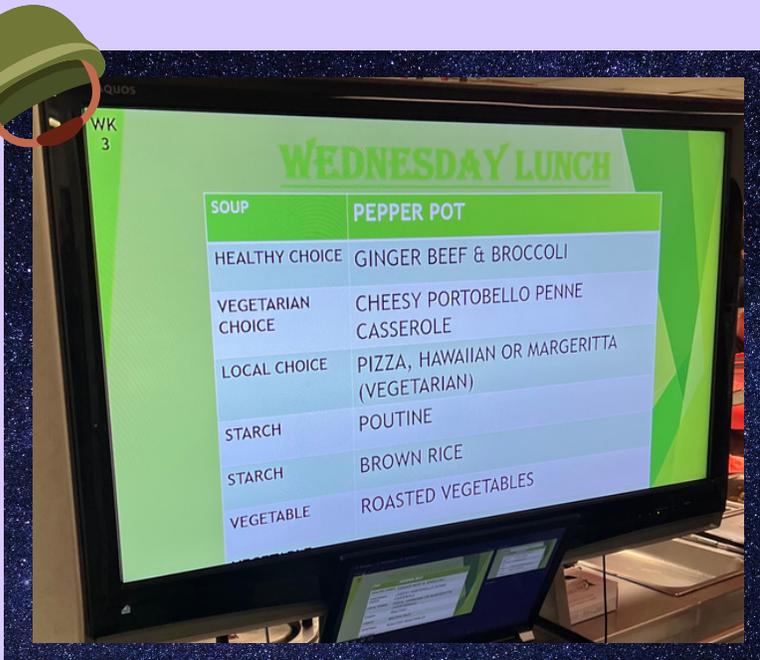
One of the days, there was a massive snow storm which shut down the Mess Hall at the Trenton Base. This meant that the team had to go somewhere out to eat. We chose a Mexican restaurant called Chilangos. The service was impeccable here.



The food here was also really good. I had some Chicken Fajitas, Refried Beans, some rice and practically unlimited tortillas! I also had a Mexican Mango Soda to wash it all down. The Fajitas were really good and came in this tiny hot plate. The tortillas were also warm and tasted fresh. The Mexican soda was good but it was basically 100% sugar....



The food at the Mess Hall in Trenton was much different from the previous two meals for sure. First, you need to stand in a line to pick up the utensils and tray. Once you get that, you need to decide what you'd like to what. All the options for the meal are displayed on a screen. You are only allowed to pick one option for the main but you can get seconds if you have the meal plan card



After you got your main and side dishes, there would be another station for salads, desserts, and other condiments. The dessert choices were pretty much the same every day which means they got boring pretty quickly. The food was decent enough after adding a little bit of salt and pepper to it. The soups were pretty good!



The breakfasts were also basically the same every day. However, to be fair, there aren't many things one can make for breakfast anyway. The Mess Hall usually had either eggs your way or pancakes/French toast. Usually you only had a choice of one, however, once I was able to get both!



On Friday's, there is usually a special meal. On the week we visited, there was Fish and Chips. However, all the tartar sauce was finished early on so I couldn't get any. The dessert was also pretty good this day! The fish was nice and crispy on the outside even though it was sitting out for long.



Lastly, the Mess Dining hall experience itself was pretty fun! Being able to talk to the team about stuff other than work and get to know each other a little bit. It really helps with feeling more comfortable with each other and creates a better working environment. Also, we got to meet other military members from different areas of the military!



Tech's Corner:

APIs

February 2023

Yash Patel, Fullstack Developer

What does it really mean?

If you've ever been part of software development, you've probably heard of the term 'API' somewhere. It's one of those terms that you hear a lot but never really know the exact meaning because it gets thrown around loosely. To make things simple, let's start with the basic definition.

API stands for Application Programming Interface which in my opinion really doesn't mean much. However, an API can be analogized with a restaurant setting. Assume yourself as the customer of a specific restaurant who wishes to order a couple items off the menu. Some items are customizable to your liking, while others are straightforward and generic. The waiter takes your order and sometime later your desired food arrives.

Now think of a software development setting. You're working on a software that provides statistical information on basketball players. You do not have direct access to the live scores so you require a third-party service to access the scores. However, you yourself are handling the display and processing of the information.

See the analogy now? The customer can be seen as the software developer, the waiter as the means by which you send your request and receive a response and the chefs as your third-party service. That third-party service is what provides us the API in this case. We send the order/data that we want and the waiter or API allows us to access the kitchen indirectly to retrieve what we want.

At no point did we require any knowledge about how our request was processed and how they created a response for what we wanted. This is handled by the chef. Even if they did, chances are they might not tell us since it is a secret recipe. Similar to code, we do not want others knowing how we wrote our code especially if they require it to handle their own work. The users could simply code their own implementation and then our code would deem useless. We simply get and eat the food (using our preferred options) and continue on.

Now, an API does not have to be a third-party software. It could simply be the functions that you made that communicate the frontend to the backend in your application. Essentially, there should be two different software components that require a way to communicate with each other. What they use to communicate with is known as the API.

Hopefully that gave you a general overview about an important term utilized in today's software industry!

References:

Hoffman, C., & Duino, J. (2021, August 13). What is an API, and how do developers use them? How. Retrieved March 7, 2023, from <https://www.howtogeek.com/343877/what-is-an-api/>

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IN OUR NEWSLETTER,
RECOMMEND 'FRIDAY
FAVOURITES' OR JUST
WANT TO CHAT?**

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