



Dear MedHacks 2019 Participants,

Welcome! The entire MedHacks team is thrilled to welcome you to the fifth annual MedHacks medical and healthcare hackathon at the Johns Hopkins University Medical School, from September 27th to September 29th, 2019. We're excited to host hundreds of the best and brightest students from around the world. We can't wait to see what this incredible group of individuals will make this weekend!

To help you make the most of your time at MedHacks, please review the information in this packet. Included are answers to a variety of questions about accommodations, food arrangements, and the schedule for the weekend. Additionally, please be sure to join our MedHacks 2019 [Facebook group](#), like us on Twitter, Instagram, and Facebook, and join the participant [Slack](#) to be up-to-date on everything happening this weekend!

If you have any questions, please feel free to ask on the FB group, Slack channel, or email us at info@medhacks.io.

Best,

The MedHacks Team

medhacks.io

facebook.com/medhacks

twitter.com/medhacks

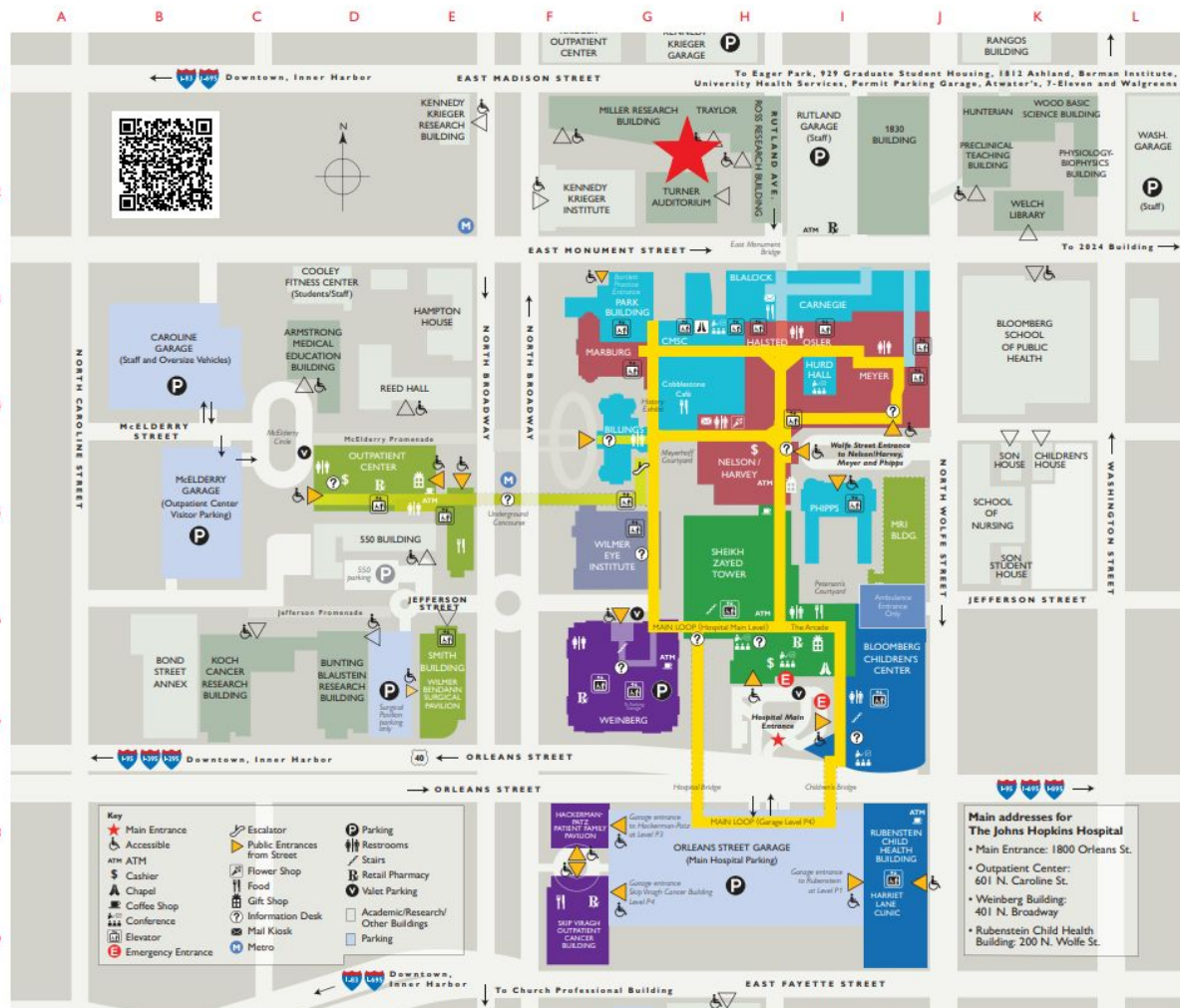
instagram.com/medhacks



Event Logistics

Location

The event will take place at Turner Auditorium at the Johns Hopkins Medical Institution (720 Rutland Avenue, Baltimore, MD 21205) on the ground floor. For check-in, the easiest entry point is to enter the courtyard via Rutland Avenue.





Parking

Parking is free in the Rutland Garage (1821 E Madison St, Baltimore, MD 21205) and the Washington Garage (701 N Washington St, Baltimore, MD 21205) after 4 pm on Friday and before 7 pm on Sunday. If you arrive after 4 pm on Friday and leave before 7 pm on Sunday, parking will be completely free. Note that the garage closes every night between midnight and 7 am, so during that time, you will not be able to enter or exit the garage.

Traveling to the Hospital

BWI (Recommended):

This is the closest airport to Hopkins. Uber/Lyft to the JHH is roughly \$30 one way. However, you can take the MARC PENN-WASHINGTON train for \$5.00 to Penn Station, then take the free JHU Shuttle southbound shuttle from Penn Station to the hospital.

Reagan:

Take the yellow line toward Greenbelt to Gallery Place, then transfer to the red line to Glenmont. Get off at Union Station, and take the MARC PENN-WASHINGTON train for \$8.00 to Penn Station. Take the free JHU Shuttle from Penn Station to the hospital.

Dulles (Not Recommended):

Take the silver line express bus (\$5.00) to Wiehl-Reston East Metrorail Station. Take the silver line to Metro Center. Transfer to the red line toward Glenmont. Get off at Union Station, and take the MARC PENN-WASHINGTON train for \$8.00 to Penn Station. Take the free JHU Shuttle from Penn Station to the hospital.

Penn Station:

Take the free JHU shuttle from Penn Station to the hospital.

Resources:

[DC Metro Map](#)

[MARC Line Map](#)

[JHU Shuttle Map](#)





Food

Meals will be provided from Friday dinner to Sunday lunch. Additionally, there will be snacks, caffeine, and other food-related events throughout the weekend!

Check-In

We will have a check-in table from 3:00 pm - 6:00 pm on Friday. If you need to arrive at some other time, just find an organizer and they will be able to help you.

Team Registration

Once you have formed your team, please make your way to the team registration table to receive your t-shirt and swag and inform an organizer of your team name and members.

Slack

MedHacks will use Slack as another channel of communication, as well as a way for you to connect to mentors. Each of the channels have a specific purpose in their description; ie #questions is for any logistical questions you might have for MedHacks organizers. You can join the channel [here](#).

Project Submissions

All submissions are due on Devpost on September 29th at 8:30:00 AM EST. Late submissions will not be accepted. The link is medhacks-2019.devpost.com. If you are having issues submitting, talk to a MedHacks organizer or speak with devpost support on the #devpost_support channel on Slack. MedHacks organizers will also be staffing devpost help sessions for the hour and a half prior to the submission deadline.

Judging

The first round of judging will be science-fair style. Each team will set up on an assigned table in the same room as the rest of their track, and judges, which may or may not include MedHacks organizers, will stop by to each team and judge them based on preset criteria.

The top three teams from each track will be invited to second round judging. During the second round of judging, these top teams will present to a panel of judges. This is a great opportunity to hear what other teams were able to come up with! There will be a community voting aspect to the judging as well.





Schedule

Friday

3:00 pm - 6:00 pm	Registration	Turner Auditorium Terrace
3:00 pm - 5:30 pm	Sponsor Fair	Turner Concourse
6:00 pm - 7:00 pm	Opening Ceremony	Turner Auditorium
7:30 pm - 8:30 pm	Dinner	Turner Concourse
8:30 pm - 10:30 pm	Track Pitching Sessions	Turner Auditorium Tilghman Auditorium G001/G003
10:30 pm - 12:00 am	Team registration and start of hacking	Turner Concourse
11:00 pm - 1:00 am	Cookie Decorating	Turner Concourse



Saturday

8:00 am - 9:00 am	Breakfast	Turner Concourse
9:00 am - 10:00 am	Namecheap: Making Your First Website	Tilghman Auditorium
10:00 am - 11:00 am	FastForward U: Intro to Entrepreneurship and FastForward U	Tilghman Auditorium
10:00 am - 11:00 am	Elsevier: Intro to User Experience Design	G007
11:00 am - 12:00 pm	EPIC: FHIR in Electronic Medical Records	Tilghman Auditorium
12:00 pm - 1:00 pm	Lunch	Turner Concourse
12:30 pm - 1:00 pm	David Burnett: Bluetooth LE PHY and MAC Layers	Tilghman Auditorium
1:00 pm - 2:00 pm	Stress Dogs	Upper concourse
1:00 pm - 2:00 pm	Dr. Paul Yi: Machine Learning for Medical Imaging - A Radiologist's Perspective	G007
1:00 pm - 2:00 pm	Life Design Lab: Careers in Healthcare	Tilghman Auditorium
2:00 pm - 4:00 pm	Gym and Shower Time	Cooley Gym
2:00 pm - 3:00 pm	Mathworks: Data Analysis and Visualization with Matlab	Tilghman Auditorium
3:00 pm - 4:00 pm	Andrew Rubin: New Paradigms for Prosthetic Development - The Cyborg Manifesto for Human Center Prosthetic Design	Tilghman Auditorium



4:00 pm - 5:00 pm	Dr. Seth Martin: Digital Health and Preventive Cardiology	Tilghman Auditorium
4:00 pm - 5:00 pm	A-Level Capital: Introduction to Venture Capital	G007
5:00 pm - 6:00 pm	APL: Health Innovation at the Applied Physics Laboratory	Tilghman Auditorium
6:30 pm - 7:30 pm	Dinner	Turner Concourse
8:00 pm	MLH Cup Stacking	Turner Concourse





Sunday

12:00 am	Insomnia Cookies and Rootbeer Floats	Turner Concourse
6:00 am - 9:00 am	Devpost Help	Turner Concourse
8:00 am - 9:00 am	Breakfast	Turner Concourse
8:30 am	Devpost Submission Due	N/A
9:30 am	End of hacking	N/A
10:00 am - 12:00 pm	Judging Round 1	Turner Concourse
12:00 pm - 12:30 pm	Lunch	Turner Concourse
12:30 pm - 2:30 pm	Judging Round 2	Turner Auditorium
3:00 pm - 4:00 pm	Closing Ceremony	Turner Auditorium



Resources

These lists are un-exhaustive suggestions for tools to get started with. If you don't know what a particular tool is a great way to get started is to google the name of the tool below followed by the name of the sub-category. I.e. the following search text, separated by single apostrophes: 'R Data Analysis' or 'XCode App Development'

Open Source/Free Software

Data Analysis:

R

Python

Octave

App development:

Android Studio

Prototyping:

Wireframe.cc

Proprietary Software

Data Analysis:

MATLAB

App Development:

XCode (Free if you have a MacBook)

Computer Aided Design:

AutoCAD (Can get a 30 day free trial)

Sketchup

Data Sets

Medicare Synthetic Claims Data Set:

<https://www.cms.gov/research-statistics-data-and-systems/downloadable-public-use-files/synpufs/index.html>

SyntheticMass: Synthetic patient and population health data

<https://synthea.mitre.org/>

<https://synthetichealth.github.io/synthea/>



Mobile Health Dataset with body motions (ECG):

<https://archive.ics.uci.edu/ml/datasets/MHEALTH+Dataset>

EHR Workflow app:

<https://smarthealthit.org/>

Medication Data for Querying (to find drug-specific information):

<https://www.kaggle.com/nlm-nih/nlm-rxnorm>

Chest x-ray datasets:

<https://www.kaggle.com/nih-chest-xrays/data>

Images of skin lesion dataset:

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/DBW86T>

Hardware Available

MLH Hardware Lab (usually includes things like Alexa, Google Home, VR, etc.)

Emotiv EPOC+ Headset

Emotiv INSIGHT Headset

Arduino Uno

Communications

Slack (For communicating with other hackers)

911 (For emergencies only)





Frequently Asked Questions

What should I bring?

MedHacks is a weekend-long event, so we recommend bringing whatever you think you'll need to stay comfortable. Feel free to use the following list for reference. We will have limited supplies available in case you forget some things.

- Hygiene Items: Our venue will have bathrooms with sinks. Showers will be available on Saturday.
 - Toothbrush
 - Toothpaste
 - Deodorant
 - Hairbrush
 - Dry shampoo
 - Face wash
 - Wet wipes
 - Makeup remover
 - Shampoo/conditioner/body wash/towels if showering
- Comfort Items:
 - Sweatshirt
 - Pajamas
 - Sleeping bag
 - Pillow
- General Items:
 - Clothes for Friday + Saturday + Sunday
 - Laptop
 - Cell Phone
 - Chargers
 - Macbook adapters

How big can teams be?

Teams can be up to 5 people. There are no exceptions to this limit; if we see that your team has greater than 5 people working, we reserve the right to disqualify the team.

How do I come up with an idea?

We have track-specific pitching sessions coordinated by the sponsor of the track. There, the track sponsor will give more insight into the problems that they're seeing in medicine, and hackers can pitch an idea that they're excited about within the field of the track. Please note that





MedHacks does NOT permit hackers to submit a project that they've been working on outside of the 36 hours of hacking at MedHacks. If we see that a team member has been working on the project prior to MedHacks, we will disqualify the team.

These pitch sessions will also be a time to meet participants and form teams with people interested in working on similar projects!

I don't have a team yet! Is that okay!

Yes! That's more than okay. We encourage hackers to come to MedHacks without a preformed team and instead meet people with similar interests and diverse skills at the event itself.

I've seen something sketchy. What do I do?

Hacker safety is hugely important to us! Johns Hopkins security officers will be present throughout the event space, and you can find them near the exits. Please report anything illegal, immoral, or anything that makes you uncomfortable to them. You can also find a MedHacks organizer and report to them.

Where can I sleep?

We will have dedicated sleeping rooms at the event. We would advise you to bring a pillow and a blanket or a sleeping bag for comfort.

What else could I win?

In addition to the three tracks, we have a number of branded prizes sponsored by other corporate sponsors. These will be announced at the opening ceremony and are on [Devpost](https://medhacks-2019.devpost.com) (medhacks-2019.devpost.com), so keep an eye out on these! There are over \$9000 in prizes!

What's up with the tracks?

At the end of MedHacks, your team will submit your project to one of our three tracks: Improving Health Outcomes (Focus Area: Preventative Medicine, Predictive Medicine, and Assured Care), Global Management of Chronic Disease, and Post-Operative Care.

More details about the scope of these tracks will be announced at the opening ceremony!





Thank you to all of our generous sponsors!



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