



FAMINE & FOOD CRISIS FORECASTING CENTER

HACKATHON #2:YEMEN

Day 2: Hackathon Session

Springboard Grant – Tier I
Sep 1, 2022 – August 31, 2023



FAMINE & FOOD CRISIS
FORECASTING CENTER

Tufts
UNIVERSITY

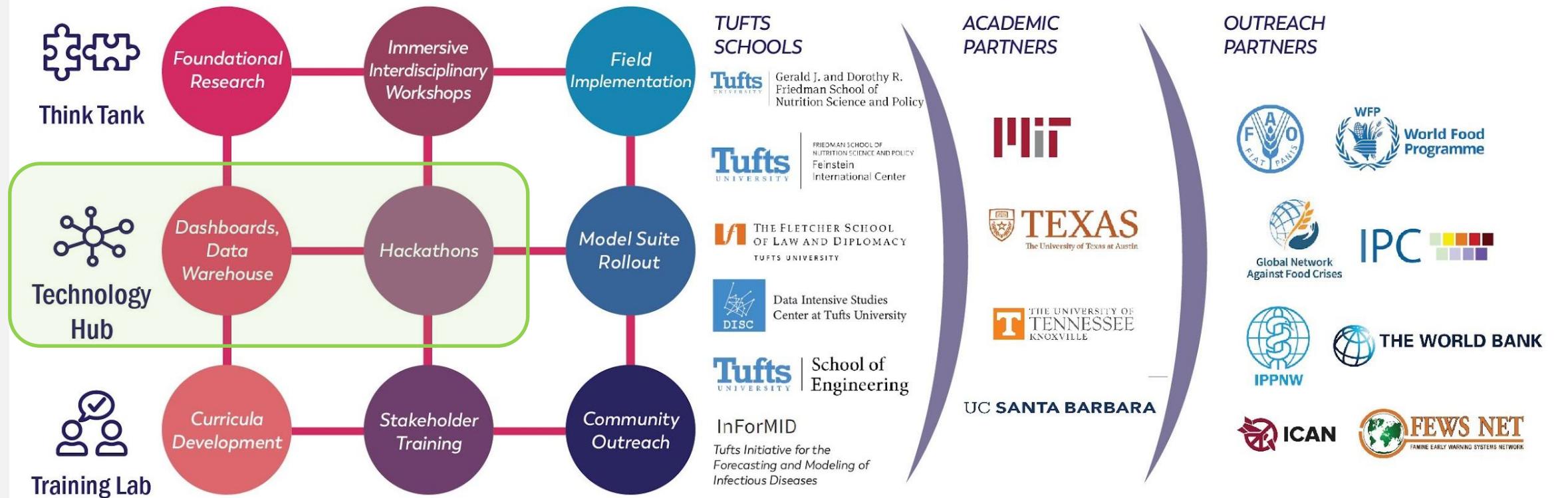
Gerald J. and Dorothy R.
Friedman School of
Nutrition Science and Policy

WELCOME!

ELENA N. NAUMOVA

PROFESSOR, NUTRITION EPIDEMIOLOGY & DATA SCIENCE

Design, Development, Testing, Implementation



Outreach & Broader Impact



Project Team

Name (First, Last)	Role	Title Appointment	Dept	School
Elena Naumova	PI	Professor & Chair	NEDS	FSNSP
Paul Howe	PI	PoP & Director	FIC	FSNSP
Daniel Maxwell	Co-I	Prof & Director	FIC	FSNSP
Anastasia Marshak	Co-I	Assist Professor	FIC	FSNSP
Merry Fitzpatrick	Co-I	Assist Professor	FIC	FSNSP
Oxana Shevel	Co-I	Assoc Professor	Pol Sci Dept	A&S
Kyle Monahan	Consultant	Manager, Data Science Services	Tufts Technology Services	A&S
Kristin Lee	Consultant	Data Librarian	Tisch Library	A&S
Elise Warren	Consultant	Graphic Designer		
Bingjie Zhou	Support	PhD student	NEDS	FSNSP
Ash Venkat	Support	PhD student	NEDS/AFE	FSNSP

Design Team Members, Students/RAs, Communication Experts, DISC,
Administrative Support

- Multi-disciplinary:
 - Humanitarian Aid
 - Political Science
 - Data Science
- Multi-cultural
- Multi-generational
- Team Science
 - vTeams
 - Knowledge transfer

Tufts Hackathons

Hackhackhack -
2013



Generation Citizen:
Civic Tech 2015

2015



Tufts Polyhack 2017

2016



ID Hack 2018

2018



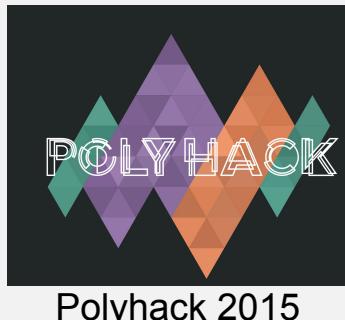
Polyhack 2020

2020



2021

2023



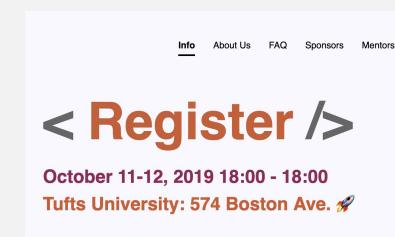
Polyhack 2015



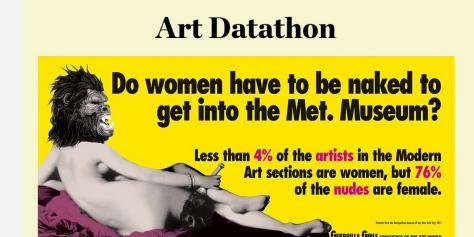
Nurse Innovation
Hackathon 2016



Dental Hack (ADEA)



Tufts Polyhack 2019



Art Datathon



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Tips for Hackathon Success

BINGJIE ZHOU

ANUSHKA SINGH

KYLE MONAHAN

DOCTORAL STUDENT, FRIEDMAN SCHOOL (NEDS)

MS STUDENT, SCHOOL OF ENGINEERING/GORDON INSTITUTE
MANAGER DATA SCIENCE SERVICES, TUFTS

Timeline

Day 1: Kickoff at TNDS

- 5-6 pm: TNDS closing remarks, introduction to hackathon (Behrakis Auditorium, Boston campus)

Day 2: Hacking session

- 9-9:30 am: Coffee and reintroductions (JCC Auditorium/Urdang 207)
- 9:30-10 am: Tips for hackathon success
- 10 am-12 pm: Hacking groups
- 12-1 pm: Working lunch
- 1-4 pm: Hacking groups
- 4 pm: Closing and next steps
- 4-9 pm: Optional extra working time



Day 3: Presentations

- 9-9:30 am: Coffee (JCC Auditorium/Urdang 207)
- 9:30-11:30 am: Finalize presentations
- 12-1 pm: Working lunch
- 1 pm: Team presentations and closing remarks

Website Overview

<https://tuftsfaminehackathon.github.io>

Teams

We strive to create interdisciplinary, multicultural, and multigenerational teams for both in-person and remote Hackathon participants. Limited team changes may be accommodated, please contact us for any requests.

A list of teams for the hackathon is available [here](#). Please confirm your participation preference (in-person or remote) by February 8, 2023.

FAQs

How to stay in touch?

- Sign up for our [Slack channel!](#) Please sign up with your Tufts email so you can login.
- Sign up for the [our elist](#), again using your Tufts email. Look out for emails from tuftshackathon@elist.tufts.edu if you have already signed up.
- If you haven't already, sign up for the [Tufts Famine Forecasting Hackathon!](#)

I signed up for the Famine Forecasting Hackathon, but I have a time conflict. Can I still attend?

Yes. We strongly recommend you attend as many days as you can, as your skills build over each Hackathon, but we welcome all attendees.

SCHEDULE TEAMS DATASET VENUE CONTACT RESOURCES

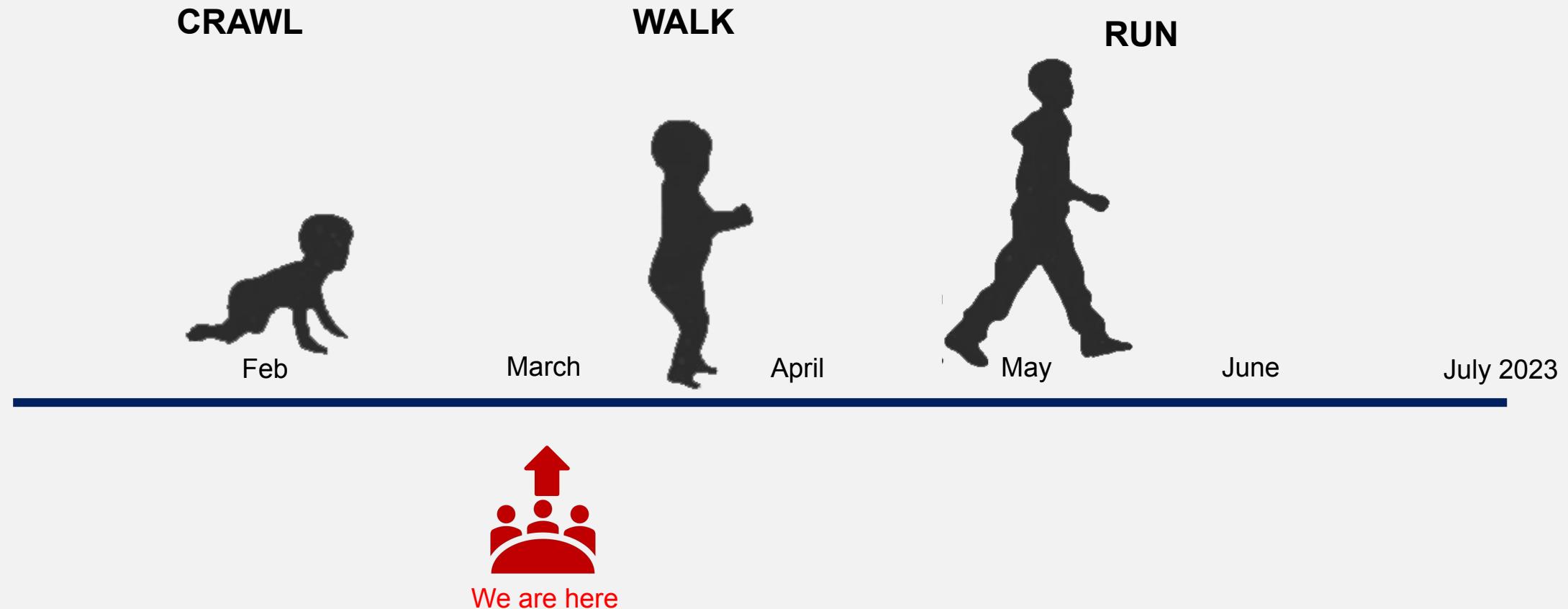
Dataset | Glossary

The dataset for Hackathon #1 derives from the UNICEF Nutrition Cluster in Yemen and contains monthly measures of various nutrition indicators. Yemen is one of the few countries with protracted, ongoing food crises for which OCHA publishes routine nutrition monitoring data. Detailed OCHA reports and monthly updates can be viewed [here](#).

The scientific exercises of the hackathon are:

- Develop a timeline of events relevant to team focus and period of the Yemen crisis (2016-present)
- Develop visualizations and summary tables of available and unavailable data in Yemen during the crisis period
- Create a merged dataset with available characteristics
- Perform preliminary quantitative analysis with the data (summary statistics, regression)

Where you are going

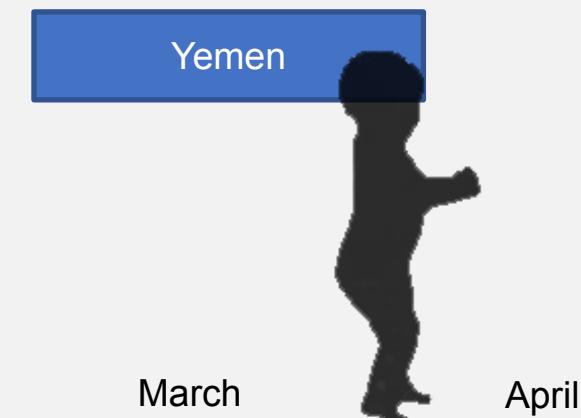


Where you are going

Feb: First
hackathon:
Learn to explore
data, create our
first dynamic
maps.



Feb



May: Third
hackathon: Compile
high-quality analysis
and publishable
figures.



May

June

July 2023

Yemen



We are here

Mar: Second
hackathon: Create
questions with **impact**.
Develop, design, and
deploy **interactive**
dashboards, maps.
Apply data science.

Ukraine

Yemen

South Sudan

June/July: Summary
meeting to disseminate
dashboards, hackathon
materials, and review
results.

Where you are going

CRAWL



Feb

WALK



March

RUN



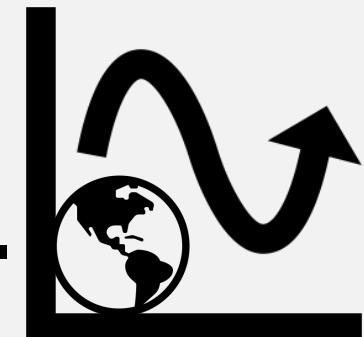
May

June

July 2023

Developing *mastery* in...

Geospatial time series famine data.



Steps for hackathon two

DATA

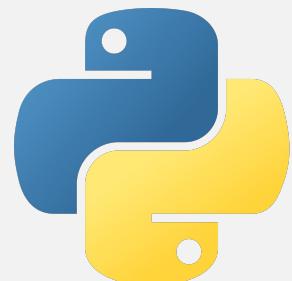
The screenshot shows a web interface for 'OCHA Services' under 'Humanitarian RESPONSE'. The top navigation bar includes links for 'Search Documents', 'OPERATIONS', 'COORDINATION', 'PROGRAMME CYCLE', 'TOPICS', and 'APPLICATIONS'. Below this, a breadcrumb trail shows 'HOME / YEMEN / NUTRITION'. A search bar and a 'Log in' button are also present. The main content area is titled 'Documents' and displays a list of 325 items. The columns include 'TITLE', 'DOCUMENT TYPE', 'LEAD AGENCIES', 'ORIGINAL PUBLICATION DATE', and 'FILES'. Some entries are 'Analysis Report' from 'United Nations Children's Fund' dated 11/13/2022. A 'NEWSFEED' button is at the bottom left.

MERGING, UNDERSTANDING, CLEANING



PRODUCT

- Dashboards
- Interactive maps
- An interactive map with video walkthrough
- Detailed documentation and timelines



Famine & Food Crisis Forecasting Center



How do I access these software?

- The **TTS Remote Lab (Adobe)** provides access to graphic or data-intensive software such as Adobe Creative Cloud suite, GIS, ENVI, SAS, SketchUp Pro, etc
 - Access the TTS Remote Lab (Adobe) on a [Windows Computer](#)
 - Access the TTS Remote Lab (Adobe) on a [Mac Computer](#)
- The **TTS Virtual Lab (VDI)** provides access to general computing software and resources. No Adobe Creative Cloud suite, GIS, etc.

For inquiries regarding which remote solution is right for you, please contact DataLab-Support@elist.tufts.edu

How can I prepare for the hackathon?

You can just arrive, no need to prepare, however, be sure to check out the suggested pre-trainings if you want to enhance your technical skills!

- R
 - [Intro R](#)
 - [Data visualization in R](#)
- Python
 - [Intro to Python](#)
 - [Scientific Computing with Numpy](#)
 - [Getting started with Python Data Analysis](#)
- Geospatial
 - [Raster analysis & remote sensing data in Python](#)
 - [Geospatial Python analysis](#)

Code of conduct

Guiding principles:

- No harassment, including personal attacks.
- No use of illegal/pirated content.
- No use of inappropriate imagery or content.
- No racist, sexist, cisexist, agist or otherwise oppressive behaviors or assumptions.
- No discrimination based on level of coding skills or knowledge of the context or content.
- We all have something to contribute.

<https://tuftsfaminehackathon.github.io/code-of-conduct/>

Code of Conduct

Welcome to the Famine Forecasting Hackathon! We are a group of amazing, and still growing community of both hackers and individuals dedicated to better understanding famines and data around famines. We are glad you are here as one of us and welcome you!

Basic rules of hackathons

Suggested rules:

- Keep an open mind.
- Allow others to contribute their experiences and background without judgement.
- Get to know your team, actively listen.
- Learn from each other.
- Don't be afraid to teach others what you know.
- Your teams are multi disciplinary - take advantage of this diversity.

Housekeeping

- Closing time of the JCC
- Access to accommodations
 - Food
 - Water
 - Bathrooms
- Tips for the hackathon
- Questions? Slack!
 - <https://go.tufts.edu/tuftshackslack>



In-person support today



Bingjie Zhou



Kyle Monahan



Anushka Singh



Merry Fitzpatrick



&

Grace Wu
Youshuang Hu

Homework - Day 2

Before the next hackathon, please do the following:

- Fill out the Qualtrics form:

<https://go.tufts.edu/hackathon2docs>

Review the Dataset page on the website:

<https://tuftsfaminehackathon.github.io/dataset/>



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Homework