The 6th Annual

Pitt Challenge

-Healthcare Hackathon Event-
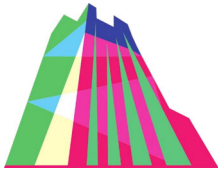
Pitt Challenge 2022 Sponsors
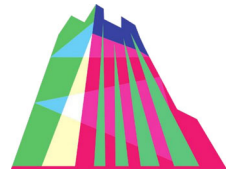
PILLAB

ReImagine Pharmacy

Produced by
The Pharmacy Innovation Lab

Mission

"Expedite healthcare innovation through experience and network"

Vision

"A world where healthcare is a leading industry in technology and education"

"Why are we passionate about healthcare innovation?"

We believe there are two problems:

The "Network Chasm"
It separates the innovators and healthcare providers for lack of knowing each other's full capabilities.

The "Complexity Gap"
The challenges we face in healthcare are not as obvious as most people think

The Pitt Challenge is a 24-hour event that brings together students from the fields of healthcare and technology to foster the execution of novel healthcare solutions.
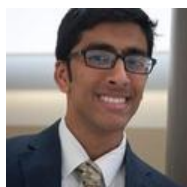
The Statistics

90 Total participants

18 Healthcare/life-science students

66 students majoring in computer science, information technology, engineering, and mathematics

11 students majoring in various other professional fields

52 First Time Hackers
24 Projects

Meet the team!

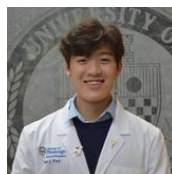### Faculty and Staff

Ravi Patel
rmp40@pitt.edu
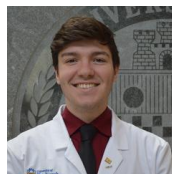PharmD, MBA, MS
Faculty, Director

Matt Freidhoff
mjf49@pitt.edu
Staff
Operations Mgr

Pharmacy Students

Ian Foo
ilf5@pitt.edu
PharmD Class of 2025

Kolbe Bien
kab392@pitt.edu
PharmD Class of 2025
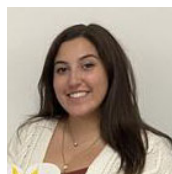
Olivia Leonardis
olr8@pitt.edu
PharmD Class of 2025
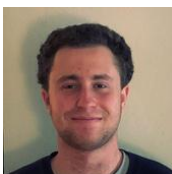
Jordan Pulaski
jap433@pitt.edu
PharmD Class of 2026

Engineering Students

Anisha Suri
ans368@pitt.edu
PhD Candidate, Electrical/Computer
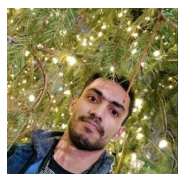
Vivswan Shah
vivswanshah@pitt.edu
PhD Candidate, AI/ML

Computer Science Students

Rohaan Wasim
row62@pitt.edu
Bachelors of Science Class of 2023

Victor Mui
vim43@pitt.edu
Bachelors of Science Class of 2022

Krit Ravichander
krr92@pitt.edu
Bachelors of Science Class of 2024

Schedule

Date	Description	Time
Oct 21	On-site Check In/Registration Opens - Join The Discord / Sign in / Fill Out Forms	5:00 PM
Oct 21	Dinner	5:00 PM - 6:00 PM
Oct 21	Opening Ceremony	6:00 PM - 7:00 PM
Oct 21	Team Formation Event	7:00 PM
Oct 21	Team/Track Finalization Deadline	10:00 PM
Oct 21	MS Paint Bob Ross With MLH	10:00 PM
Oct 22	Midnight Snack	12:00 AM
Oct 22	Morning Yoga	7:00 AM
Oct 22	Breakfast	8:00 AM
Oct 22	Project Pitch Coaching	10:00 AM
Oct 22	DigitalOcean Overview & Workshop (Virtual)	11:00 AM
Oct 22	Lunch	12:00 PM
Oct 22	Gilead Patient Engagement Event (Virtual)	1:00 PM
Oct 22	Snyk Cybersecurity Challenge With MLH	2:00 PM
Oct 22	DevPost Submission Deadline	4:30 pm
Oct 22	Dinner	5:00 PM - 6:00 PM
Oct 22	Judging	5:00 PM - 7:00 PM
Oct 22	Closing Ceremony and Awards	7:00 PM - 8:00 PM

PRIZE SUMMARY

1 $3,000

2 $2,000

3 $1,000

2022 Tracks

Gilead - Patient Engagement

Gilead - Health Equity and Diversity

Increasing Health Literacy

Boosting Vaccination Uptake/Experience

Big Data/Machine Learning In Healthcare

Gilead - Where Digital Doesn't Work

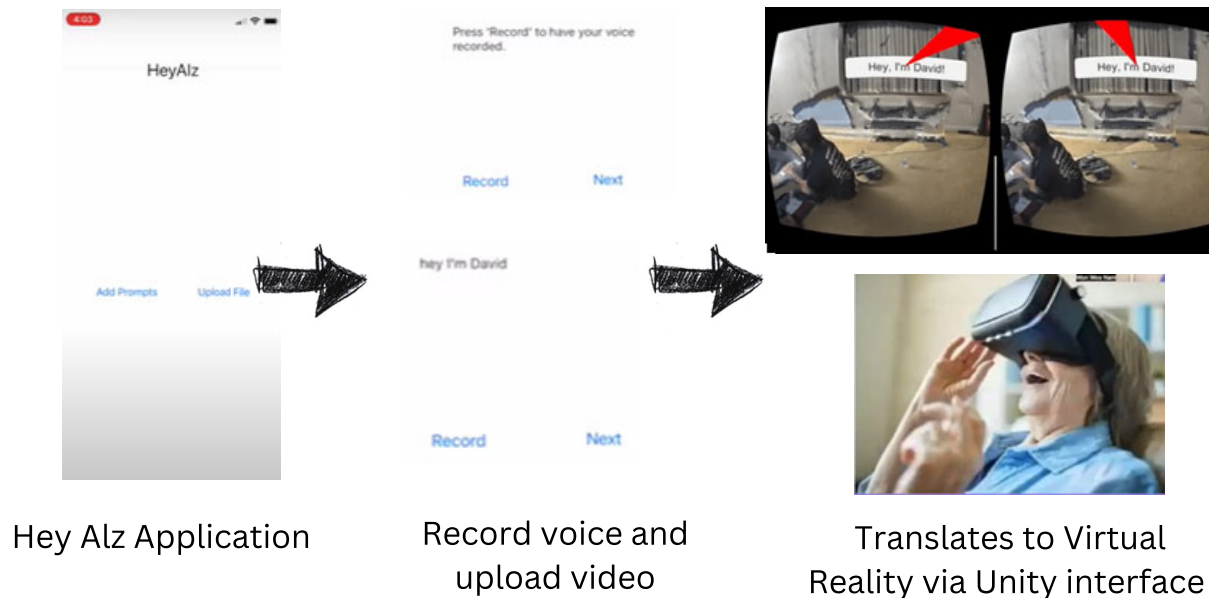Pittsburgh Regional Health Initiative - Patient Safety

Lifestyle As Medicine

Going Face-To-Facetime

Virtual Medical Simulation

1st Place: Hey Alz

Devpost Link: https://devpost.com/software/hey-alz

Hey Alz Application

Record voice and upload video

Translates to Virtual Reality via Unity interface

Inspiration

Being in the shoes of caregiver's shoes of patients with Alzheimer's disease was their main motivation for this product. Grandparents of our teammate David are suffering from this disease, so lowering the burden of patients and caregivers had real life implications.

What it does

Hey Alz is a Virtual Reality (VR)-based personalized memory training app that helps to recall important memories of patients with Alzheimer's disease. Before the last stage of Alzheimer, family members of the patient will scan the place of an event and record the conversations that took place in that event. Once the patient puts on the VR set that is playing the Hey Alz app, he/she is back to the major event that took place and Hey Alz replays back the event by helping reconstruct the memory.

Meet Hey Alz

Enkhjargal Ganbaatar
Katz School of Business, University of Pittsburgh
Email: eng35@pitt.edu
Major: Graduate, Marketing

David Nam
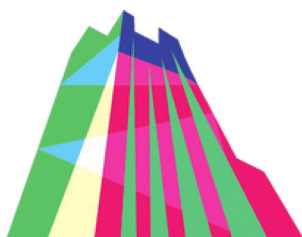**School of Computer Science, Carnegie Mellon University**
Email: wwnspider@gmail.com
Major: Computer Science, Fine Arts

Yicheng Zhang
Swanson School of Engineering, University of Pittsburgh
Email: yiz170@pitt.edu
Major: Graduate, Bioengineering

Anurag Subedi
College of Engineering, University of Toledo
Email: asubedi@rockets.utoledo.edu
Major: Bachelors, Computer Science

Congratulations!

2nd Place: SkinsAI

DevPost link: https://devpost.com/software/skinsai

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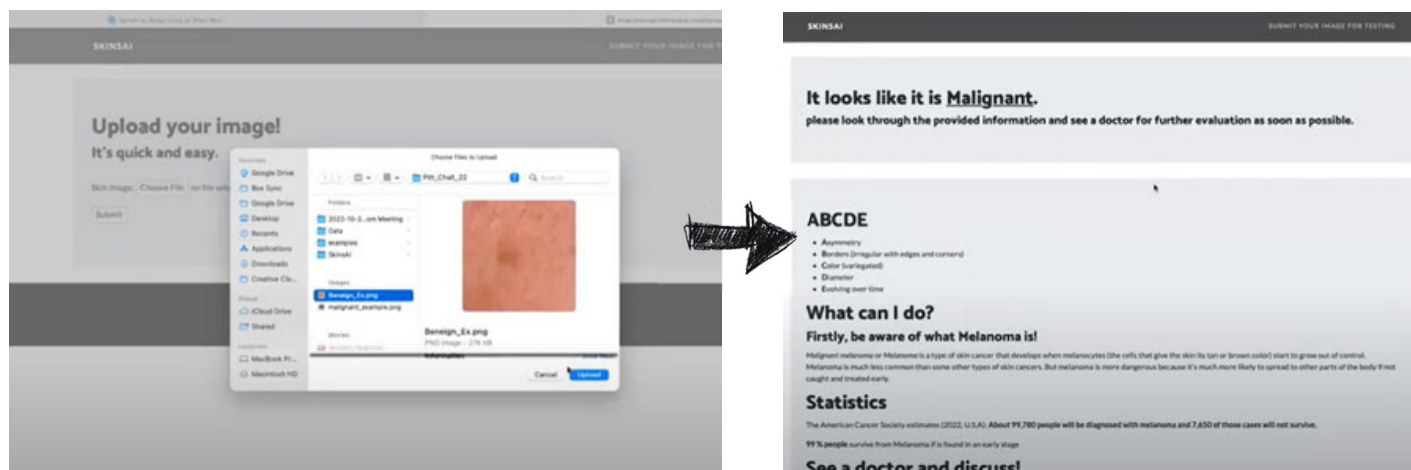
About SkinsAI

SkinsAI (Skin Key Imaging Nursing System) is a free-access diagnosis tool for classifying moles as benign or malign. Based on a convolutional neural network model, SkinsAI gives patients a first diagnosis, as well as a website where useful and up-to-date information can be gathered.

Team Members

Dennis Johan Loevlie
Email: DEL76@pitt.edu
Major: Graduate Researcher

John El Berch
Email: joe48@pitt.edu
Major: Chemical Engineering
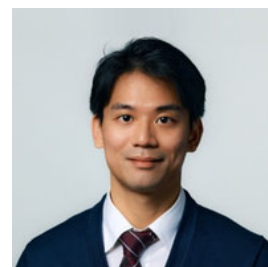
Sungil Hong
Email: suh33@pitt.edu
Major: Chemical Engineering

3rd Place: Fosco

DevPost link: https://devpost.com/software/fosco
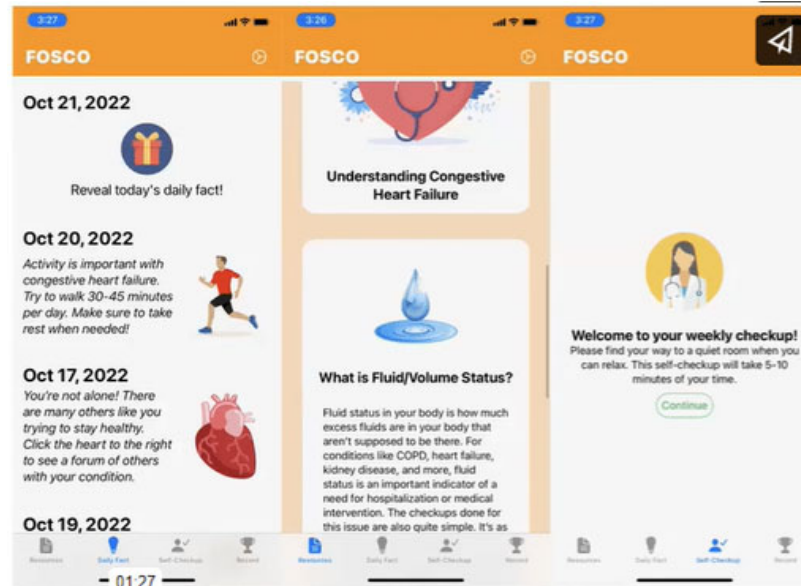
About Fosco

Fosco is a mobile application that helps patients check their weight, signs of peripheral edema, and signs of fluid in the lungs all by themselves.

Team Members

Ronit "Papai" Kar

Email: rok73@pitt.edu

Major: School of Medicine

Campbell Martinez

Email: cam431@pitt.edu

Major: Psychology

Gaoxiang Zhou

Email: gaz11@pitt.edu

Major: Electrical Engineering

Track Winners

Gilead - Patient Engagement
POPGx | Christina Kim (kimc29@vcu.edu), Jessica Lai (laijm@vcu.edu), Amir Behdani (behdania@vcu.edu)
"POPGx is a drug-gene interaction checker also provides counseling points and appropriate dosing for that given patient according to the metabolism phenotype they display."
Devpost Link: https://devpost.com/software/popgx

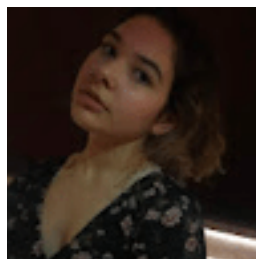**Gilead - Health Equity and Diversity**
fAIrplay| Anirudh Vaihyaa (avvenkat@andrew.cmu.edu), Joseph Bajor (jbajor@andrew.cmu.edu)
"An AI-enabled virtual integrated patient navigation suite to improve diversity, inclusion and equity in cancer clinical trial."
Devpost Link: https://devpost.com/software/fairplay

Gilead - Where Digital doesn't Work
Explainable AI for Breast Cancer Thermography Screening | Alistair Turcan (alt245@pitt.edu), Akanksha Sachan (aks203@pitt.edu), Chaitanya Srinivasan (csriniv1@andrew.cmu.edu), Mike Gee (mgee3@andrew.cmu.edu)
"Uses thermographic images of patients for early diagnosis of breast cancer."
Devpost Link: https://devpost.com/software/explainable-ai-for-breast-cancer-thermography-screening

Patient Regional Health Initiative - Patient Safety
Pill Identifier | Jeffrey Zheng (jez43@pitt.edu), Steven Johns (srj42@pitt.edu), Tobias Beidler-Shenk (tab197@pitt.edu), Kavin Sankar (kas595@pitt.edu)
"Our pill identifier allows a user to take a picture or ipload a file of a pill and in return get which pill is most likely classifies as from our data set."
Devpost Link: https://devpost.com/software/pill-identifier-zjul38

Lifestyle as Medicine
Med-Help| Connor Clifford (cclifford2004@gmail.com), Yu Lu (ylinlu6220@gmail.com), Xirui Ren (xir19@pitt.edu)
"The app keeps track of the user's name, age, sex, weight, medical conditions, and medicine they are taking. When adding any new medicine, the app alerts the user if the medicine is incompatible with any current medicines they are taking. "
Devpost Link: https://devpost.com/software/med-help-eig31c

Track Winners Con.

Increasing Health Literacy
AccessRx | Julius Arolovich (jua55@pitt.edu), Limiao Wang (limiaow@andrew.cmu.edu), Zaixing Zhang (zaixingz@andrew.cmu.edu)
"An app helping elderly people who speak limited English to have less difficulty reading medicine labels and taking pills."
Devpost Link: https://devpost.com/software/accessrx

Going Face-to-Facetime
CloverBot | Jake Kressley (JAK483@pitt.edu), Emma Tristano (emt101@pitt.edu), Tiffany Xiao (tix24@pitt.edu), Jason Dou (xid40@pitt.edu)
"CloverBot provides emotional support during recovery."
Devpost Link: https://devpost.com/software/cloverbot

Big Data/Machine Learning In Healthcare
MyCGMBuddy | Prerna Dodeja (prd22@pitt.edu), Nupur Chaphekar (nkc8@pitt.edu), Manuel Alejandro Garcia Acosta (mag385@pitt.edu), Mahmoud Elkhadrawi (mae116@pitt.edu)
"This simple Graphical User Interface(GUI) tool is an effective, dynamic dose optimization tool that patients can use for managing their own insulin therapy."
Devpost Link: https://devpost.com/software/mycgmbuddy

MLH PRIZE WINNERS

Best Use of Velo by Wix
Healthy Prices | Ajwad Ishaque (ajwad25@gmail.com), Ojas Mishra (ojm15@pitt.edu), Kathryn Bager (kab521@pitt.edu)
"The goal of HealthyPrices is to create a financial transparency app and website that can both educate and engage users, to see what people have paid for in various health care operations."
Devpost: https://devpost.com/software/healthyprices

Best Domain Name From Domain.com
AccessRx | Julius Arolovich (jua55@pitt.edu), Limiao Wang (limiaow@andrew.cmu.edu), Zaixing Zhang (zaixingz@andrew.cmu.edu)
"An app helping elderly people who speak limited English to have less difficulty reading medicine labels and taking pills."
Devpost: https://devpost.com/software/accessrx

MLH PRIZE WINNERS

Most Creative Use of GitHub
**MyCGMBuddy | Prerna Dodeja (prd22@pitt.edu), Nupur Chaphekar
(nkc8@pitt.edu), Manuel Alejandro Garcia Acosta (mag385@pitt.edu), Mahmoud Elkhadrawi
(mae116@pitt.edu)**
"This simple Graphical User Interface(GUI) tool is an effective, dynamic dose optimization tool that
patients can use for managing their own insulin therapy."
Devpost: https://devpost.com/software/mycgmbuddy

Best Accessibility Hack By Fidelity
**HeyAlz | Enkhjargal Ganbaatar (eng35@pitt.edu), David Nam (wwnspider@gmail.com), Yicheng
Zhang (yiz170@pitt.edu), Anurag Subedi (asubedi@rockets.utoledo.edu)**
"It is a vr-based personalized memory training app that helps to recall important memories of
patients with Alzheimer's disease."
Devpost: https://devpost.com/software/hey-alz

Check-Out Other Submissions!

Patient Link| Parth Patel (pjp59@pitt.edu), Vaageesha Das (vad50@pitt.edu), Jason Ye (jay101@pitt.edu)

"An app that sends daily patient data to their provider. Patients wear a watch and any other device specific to their illness. This data, along with their blood pressure, heart rate, etc. would be sent to the physician. "
Devpost Link: https://devpost.com/software/patient-link-5wcz1i

Centralized Health Records (CHR)| Brayden Nguyen (btn16@pitt.edu), Paul Doherty (gpd16@pitt.edu), Russell Kirkpatrick (rlk70@pitt.edu)
"Compiles and parses PDFs to text and displays in formatted manner."
Devpost Link: https://devpost.com/software/centralized-health-records-chr

Pipeline| Raheel Farouk (raheelfarouk@pitt.edu), Kiana Kazemi (kik39@pitt.edu), Joseph Szlavik (jjs229@pitt.edu)
"Pipeline is an interactive kiosk where patients can seek medical care and also connects users to healthcare providers."
Devpost Link: https://devpost.com/software/pipeline-3ek910

CALMLE| Ande Marini (ande.marini@pitt.edu), Christian Marini (j.christian.marini@gmail.com), Oliver Yao (oly4@pitt.edu), Shuqi Liu (shl187@pitt.edu)
Devpost Link: https://devpost.com/software/calmle

LegalFraud | Hina Sekine (His38@pitt.edu)
Devpost Link: https://devpost.com/software/legalfraud

Healthdeck| Aleena Usman (alu17@pitt.edu), Roja Kafle (rok85@pitt.edu), Srushti Chavan (ssc59@pitt.edu), Badri Raghavan (bar85@pitt.edu)
"We used buildfire, an app development tool, to create an app that educates people on emergency procedures."
Devpost Link: https://devpost.com/software/healthdeck-pc35eh

ADRP | Eric Wang (ejwang2@andrew.cmu.edu), Angela Wu (asw2@andrew.cmu.edu), Craig Mellor (cmellor@andrew.cmu.edu)
"Use Google search data to predict adverse drug reactions ahead of FDA relabeling"
Devpost Link: https://devpost.com/software/adrp

Check-Out Other Submissions!

Remedy DTx|Rohit Marwah (rom107@pitt.edu), Cole Stevens (cas405@pitt.edu), Yunjia Zhang (yuz153@pitt.edu), Steven Zhou (xiz198@pitt.edu)

Devpost Link: https://devpost.com/software/remedy-dtx

I-Reach | Akshay Kumar Gupta (Akg6167@psu.edu), Garv Jasuja (Gkj5081@psu.edu), Vijay Basker Chiluveru (vbc5136@psu.edu), Ahmad Al-Hadidi (aalhad1@students.towson.edu)
"A disposable handy communication device to recruit underrepresented participants. Supports multiple languages. Has built in mic and speakers to engage and screen to read messages. Can run on free city wifi."
Devpost Link: https://devpost.com/software/i-reach

HCard | (deekshajreddy@gmail.com)
Devpost Link: https://devpost.com/software/hcard

Judging Criteria

Technical Complexity

How technically ambitious was the project? How much did the team complete? Up to 30 points

Problem

How clearly was the problem defined? How directly was it linked to a user pain/need (empathy)? Up to 15 points

Creativity

Does the solution attempt to solve the problem in a novel way? Up to 5 points

Elegance

How practical is the solution as it pertains to the end user? Up to 5 points

Value

How large is the market potential and/or impact to healthcare? Up to 5 points

Promote to others

How likely are you to recommend this solution/product for a user with the problem? Up to 10 points

Promote to others

What percentage of your investable income would you invest in this solution? Up to 5 points

Judges

Name	Title/Experience	Organization
Marijenael Alilio	Neurology Service Line Pharmacist (Inpatient)	UPMC Presbyterian Hospital
Jieshi Chen	Senior Research Analyst	The Auton Lab, Carnegie Mellon University
Phil Empey	Associate Director of Pharmacogenomics	Pitt/UPMC Institute for Precision Medicine
Basker Gummadi	Head of Digital Health	Gilead Sciences
Tim Huang	Research Assistant Professor	University of Pittsburgh School of Computing and Information
Mohamed Kashkousk	Global Business Development Fellow	Daiichi Sankyo, Inc.
Robert Lasko	Emergency Medicine Clinical Pharmacist	Washington Health System
Eric LeCato	Staff Pharmacist	UPMC Children's Hospital of Pittsburgh
Anna Li	Founder, CEO	Korion Health (PittChallenge Winner)
Jose Nery	Pediatric Inpatient Pharmacist	UPMC Children's Hospital of Pittsburgh
Jonathan Spring	Member of Technical Staff	Carnegie Mellon University
Britney Stottlemeyer	Pharmacist, PhD Student	PittPharmacy, Pharmaceutical Outcomes

Mentors / Presenters

Name	Title/Event	Organization
Tom Julian	Associate Director, Innovation Integration	Gilead Sciences
Alli Chapman	DigitalOcean Overview & Workshop (Virtual)	Digital Ocean
Angi Gillen	Head of Patient Experience/ Patient Engagement Event	Gilead Sciences
Tao Ren	Graduate Student, PittChallenge Alum	University of Pittsburgh
Stacey Bledsoe	Head of Global Clinical Trial/ Diversity and Inclusion	Gilead Sciences
Jared Baeten	Vice President of Clinical Development/Clinical Trials Overview Discussion	Gilead Science
Rajesh Patel	T&I Clinical Operations	Gilead Sciences
Mara Yerk	Strategy Insights & Planning Consultant	ZS Associates
Jeremy Zhang	Senior Director, Advanced Analytics	Gilead Sciences
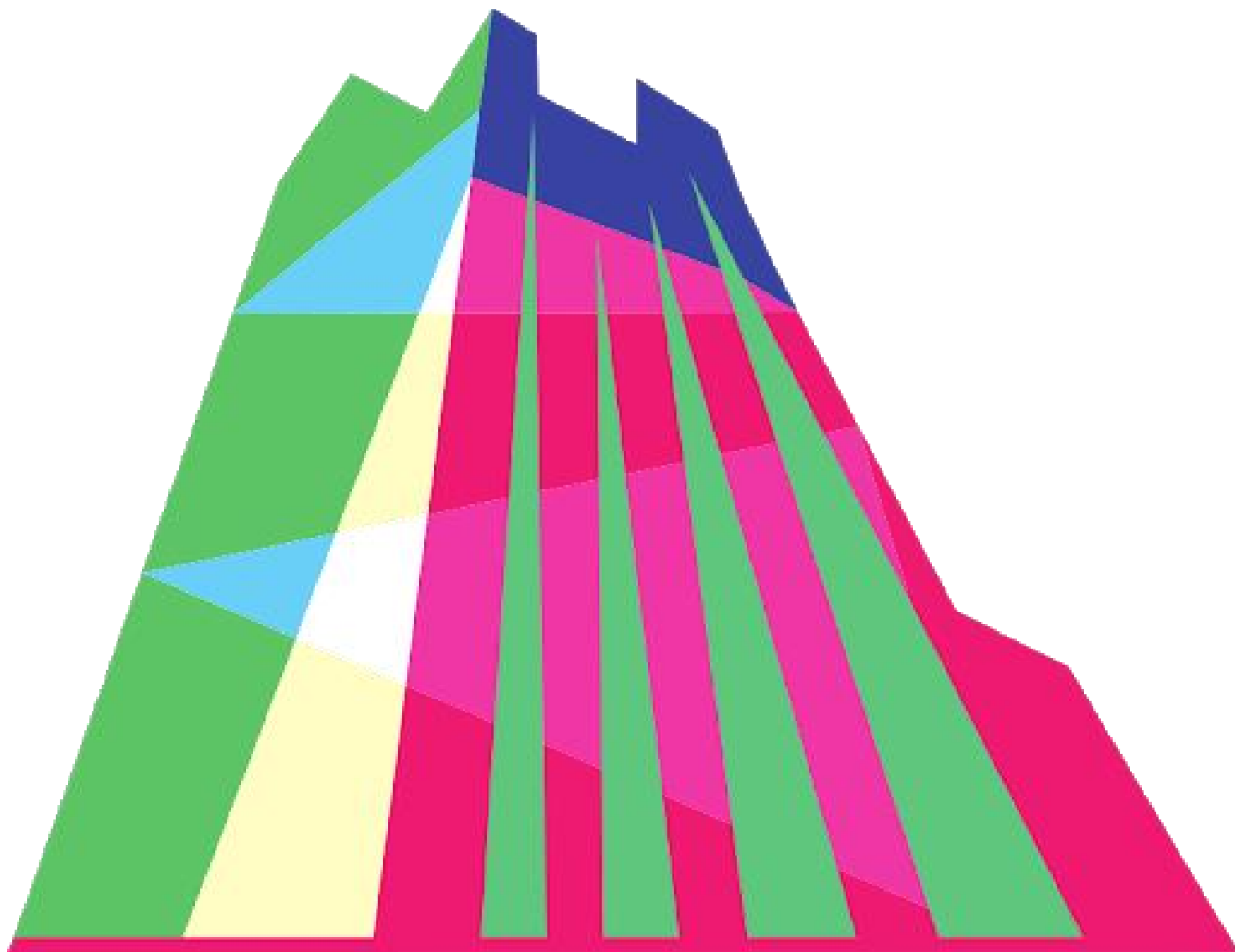
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Thank You

Let's change healthcare together!