

SYSTEMIC INNOVATION-DIGITAL HEALTH

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AT SHEBA MEDICAL CENTER

WE CAN'T AFFORD TO CONTINUE DELIVERING HEALTHCARE THE SAME WAY ANYMORE.



THE MISSION OF ARC AT SHEBA

TO CREATE AN INTEGRATION OF RESEARCH, MEDICINE, ACADEMIA, INDUSTRY AND ENTREPRENEURSHIP TO

ACCELERATE PROCESSES,

REDESIGN HEALTHCARE DELIVERY AND

COLLABORATE WITH OTHER HEALTHCARE ORGANIZATIONS.

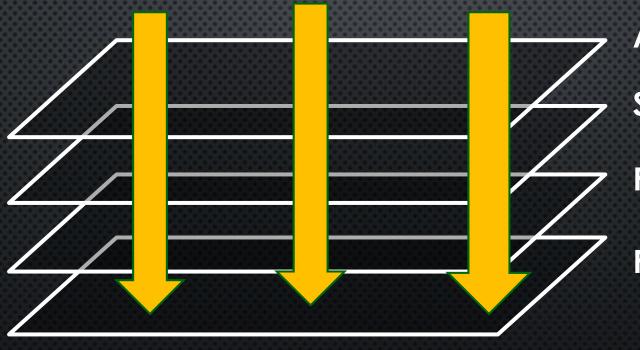
Newsweek

NEWSWEEK RANKS SHEBA MEDICAL CENTER AMONGST WORLD'S TOP 10 BEST HOSPITALS

20 MARCH, 2019



BIG Data &AI Precision-Medicine Models for Remote care



Academia

Strategic partners

From outside

From within



Examples for Machine Learning Models

Predicting Outcome for inpatients with Congestive Heart Failure

Predicting treatment choice for elderly population with hip fracture: conservative vs surgery

Predicting newborns outcome in the NICU

Predicting early signs of dementia fundus and retinal imaging in population with family history of dementia



From outside:

24 startups are working We saw around 120 in two years.























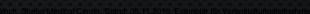














Deep Learning Tailored For Radiology

Al based decision support software

Technology analyzes medical imaging to provide the most comprehensive solution for detecting acute abnormalities

Empowering radiologists to detect urgent cases faster and reducing overall report turnaround time directly in the workflow



Strategic Partners:

Collaborative work on mutual needs to develop new products

Benefits include:

- On-site access to Sheba's data warehouse
- Direct access to clinical facilities and experts
- Physical presence within the center.
- First right of refusal for sponsored development











NATIONAL NETWORK

- ARC as the home for digital health innovation
- Data-sharing
- Collaboration on specific R&D projects













INTERNATIONAL NETWORK

Academic medical centers and accelerators:

- Co-innovation
- Beta-sites
- Data sharing



















Stanford University Medical Center







REAL-TIME PIPE-LINE ANALYTICS AND INPUT TO PRODUCTION WORK

WE ARE WORKING ON ESTABLISHING A COHORT OF PARTNERS TO CREATE A REAL-TIME SYSTEM THAT COLLECTS DATA FROM DIFFERENT RESOURCES PULLED TOGETHER IN AN ARCHITECTURE THAT ALLOWS MACHINE-LEARNING TOOLS TO ANALYZE THE DATA AND TO BRING THE OUTPUT TO THE PROVIDERS DESKTOP IN REAL-TIME.

CONTINUOUS APPLICATIONS Google **OPERATIONAL DATA Microsoft Azure INGEST ENRICH** f(x)f(x)**EXTERNAL DATA** SOURCES/LAKES **EXTERNAL SOURCES ALERTS** SERVICES f(x)REAL TIME DATA SERVICES INTERACTIVE DASHBOARDS DATA SCIENTISTS



IN SUMMARY

INFLUENCING THE CULTURE FOR INNOVATION WITHIN A HOSPITAL TO EDUCATE THE NEXT GENERATION OF PHYSICIANS WITH A CREATIVE THINKING AND USING ADVANCED TECHNOLOGIES.

ENVISIONING THE USE OF REAL-TIME AI MODELS BY THE CARING TEAM IN THE FUTURE HOSPITAL AND NAVIGATING THE TECHNOLOGIES WE CHOOSE TO FIT INTO THIS ROAD MAP.







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