

Leveraging Cloud Computing for AI R&D

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American AI Initiative and National AI R&D Strategic Plan

EXECUTIVE ORDERS

Executive Order on Maintaining American Leadership in Artificial Intelligence

— INFRASTRUCTURE & TECHNOLOGY | Issued on: February 11, 2019



THE NATIONAL
ARTIFICIAL INTELLIGENCE
RESEARCH AND DEVELOPMENT
STRATEGIC PLAN: 2019 UPDATE

A Report by the
SELECT COMMITTEE ON ARTIFICIAL INTELLIGENCE
of the
NATIONAL SCIENCE & TECHNOLOGY COUNCIL

JUNE 2019

VA



National Artificial Intelligence Institute



RECOMMENDATIONS FOR
LEVERAGING CLOUD COMPUTING
RESOURCES FOR FEDERALLY FUNDED
ARTIFICIAL INTELLIGENCE
RESEARCH AND DEVELOPMENT

A Report by the
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NOVEMBER 17, 2020

Recommendation 1: Pilots

- Coordinated by the NSTC Select Committee on AI and its operational arm, the NSTC Subcommittee on MLAI, Federal agencies that support AI R&D should **launch and support pilot projects** to identify and explore the advantages and challenges associated with the use of commercial clouds in conducting federally funded AI research, and document and broadly share the results and associated best practices that emerge from those experiences

Why AI at VA?

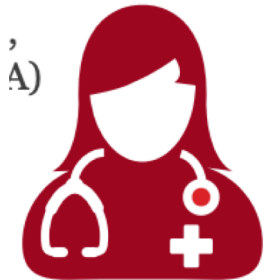


9.1 million +
patients, making VA
the largest integrated
healthcare system in
the United States

800 thousand
genomic
donations tied
to medical
records, the
largest such
database in the
US



1200 +
medical facilities
across all 50 states
and US territories



120 thousand +
doctors and nurses in VA,
with nearly 75% of all US
doctors trained in VA
hospitals

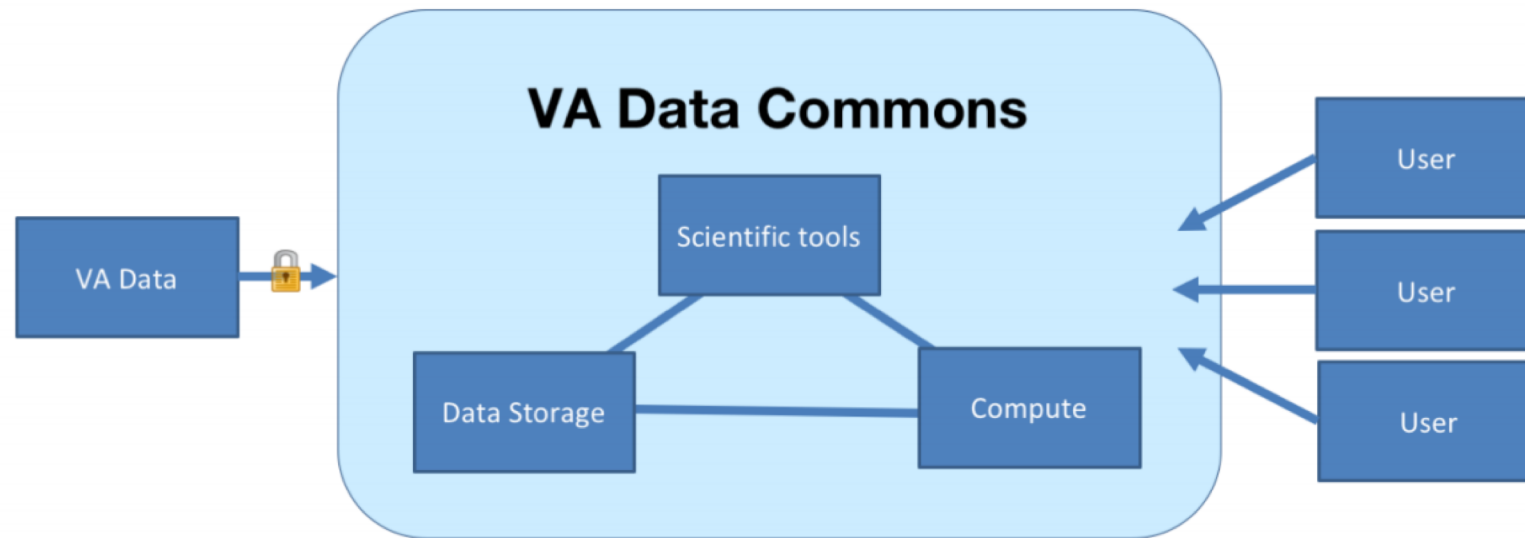


2.18 million +
telehealth
episodes of care per year

727 thousand +
Veterans served
By telehealth per year

VA Data Commons pilot

- Enable de-identified data access, tools, Million Veteran Program genomics data, EHR data (9+ million veterans).



The National VA Data Commons Pilot: Principles and Early Results

Gil Alterovitz, PhD, FACMI^{1,2}, Justin Koufopoulos¹, Hamid Saoudian^{3,4}, Rachel B Ramoni,
DMD, ScD¹, Scott L Duvall, PhD^{3,4}

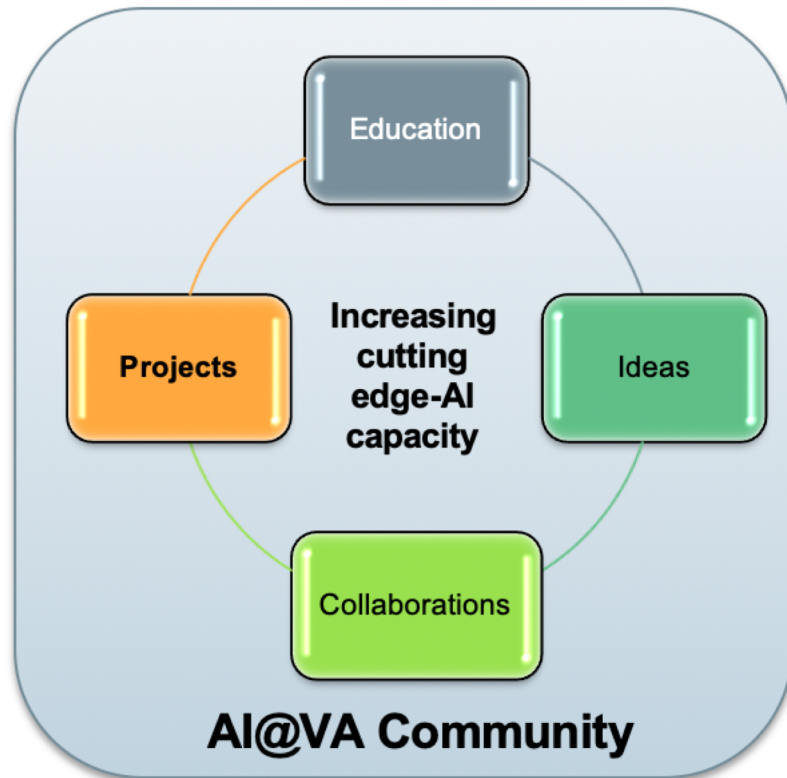
https://www.research.va.gov/data/the_national_va_data_commons_pilot.pdf

Recommendation 2: Education

- Within 90 days of publishing this report, the NTSC MLAI Subcommittee should establish a task force to outline an approach to **educating and equipping those engaged in AI R&D with the skills needed to use cloud-based platforms** and technologies to help realize their full benefits for advancing AI frontiers. The task force should publish a report on its findings within 180 days.

AI@VA Community

The AI@VA community will connect those with interest in cutting-edge AI at every level of the organization with links to training, opportunities for collaboration, and one another.



Join the list here:

<https://www.research.va.gov/naii/join.cfm>

If outside VA, please contact: NAII@va.gov

Recommendation 3: Identity management

- Within 90 days of publishing this report, the NSTC MLAI Subcommittee should establish a task force to examine **best practices in identity management and single-sign-on strategies** within government and across the research community to identify near- and long-term approaches that will enable more effective use of the variety of commercial cloud resources, with a focus on accelerating AI R&D activities. Implementation of the best practices and strategies should be coordinated through the NSTC MLAI Subcommittee, with the results shared broadly.


AI model run on cloud for empowering clinical trial search

abc 7 WJLA

NEWS WEATHER CORONAVIRUS 7 ON YOUR SIDE CHIME IN WATCH LIVE

Northern Virginia students launch app that connects patients to clinical COVID trials

by Kellye Lynn | Tuesday, February 2nd 2021



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VIEW ALL PHOTOS

The app connects veterans and Medicare and Medicaid recipients to clinical and COVID trials. (ABC7)

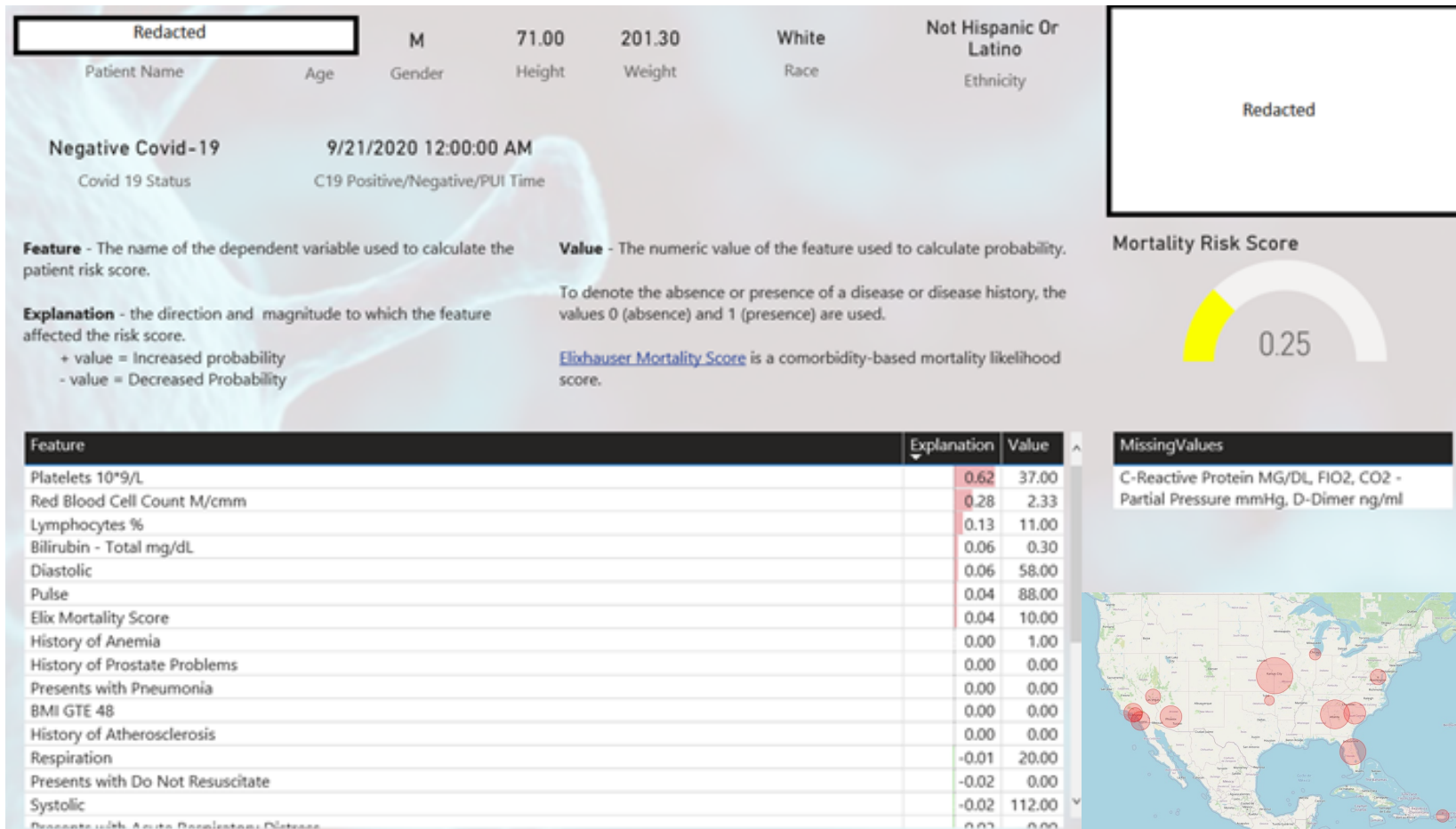
<https://wjla.com/news/local/northern-virginia-students-launch-app-connects-patients-clinical-covid-trials>

Recommendation 4: Openness/Interoperability

- Within 90 days of publishing this report, the NSTC MLAI Subcommittee should establish a task force to **establish and publish best practices that use open approaches and promote model/code reuse/interoperability** among commercial cloud provider platforms so that AI software can work seamlessly across different platforms without the need for per-cloud customization, again with a focus on accelerating AI R&D activities. Implementation of the best practices should be coordinated through the NSTC MLAI Subcommittee, with the results shared broadly.

AI to go / AI at Point of Care

- Enabling R&D models to be piloted tested clinically with cloud backend



Contact and More Information

Contact:

NAII@va.gov

AI@VA Community: Cutting edge AI R&D:

research.va.gov/naii/join.cfm

"Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Networking and Information Technology Research and Development Program."

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