Leveraging Cloud Computing for AI R&D

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EXECUTIVE ORDERS

Executive Order on Maintaining American Leadership in Artificial Intelligence

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

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

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).
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.
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

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
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