

LIFE Form Review

CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project Updates: Progress Ratings

Title	GP	OnC	NC	OffC	A
(7a.001.UL) Fault-tolerance Strategies for Handling Data-stream ...	1	3	0	0	1
(7a.002.SBU) The Data Voyager - Interactive Visualization of Mu ...	0	3	0	0	1
(7a.003.UL) Ontology-based Fast Semantic Indexing for Structure ...	2	1	0	0	0
(7a.004.DU) Large-Scale Probabilistic Anomaly Detection from Te ...	0	0	0	0	0
(7a.005.UL_U) A Cyberinfrastructure System for Real-Time Flood ...	0	2	0	0	1
(7a.007.DU) Novel Methods for Data Integration and Information ...	0	3	0	0	0
(7a.010.UL) Event Detection and Classification from Live Video ...	0	3	0	0	1
(7a.013.UVA) Privacy Preserving Multi-Party Analytics	2	1	0	0	0
(7a.014.UVA) Data-Driven Dynamic Models for Exploring Systemic ...	0	2	0	0	0
(7a.016.DU) A Continual Learning Framework for Domain Adaptatio ...	0	1	0	0	1
(7a.018.UL_U) A Comprehensive Data Integrity/Trust Approach for ...	0	3	0	0	0
(7a.019.DU) Image Informatics for the Characterization of Molec ...	0	1	0	0	0
(7a.020.UVA) Deep Learning and Adversarial Learning in Credit C ...	2	0	0	0	0
(7a.021.TUT) Early Detection of Myocardial Infraction Using Ech ...	0	0	0	0	2
(7a.022.TUT) Unsupervised Color Constancy using Adversarial Lea ...	0	1	0	0	1
(7a.024.TUT) Real-time Data Analytics Using Edge Computing Infr ...	0	1	0	0	0
(7a.025.TUT) Multimodal Data Integration in Intelligent Buildings	0	0	0	0	0
(7a.026.TUT) Improving Speech Recognition Robustness	0	0	0	0	1
(7a.028.TUT) Co-Botics “ Intelligent Cooperating Robots and H ...	0	0	0	0	0
(7a.029.TUT) Very Fast Nearest Neighbor Retrieval in High-Dimen ...	0	2	0	0	0
(7a.032.UVA) Development of Human and Machine Predictive Mainte ...	0	1	0	0	0
(7a.035.UVA) Improved Decision Making for Autonomous Systems	1	1	0	0	1
(7a.039.DU) Development of LSTM Models for Accuracy Enhancement .	0	0	0	0	0
(7b.040.UNCC) Extending Payroll Data Through Mocromodeling	1	1	0	0	1
(7b.041.SBU) Medical Insurance Claim Prediction	0	2	0	0	0
(7b.042.SBU) Immersive Data Visualization	0	0	0	0	0
(7b.043.SBU) Dynamic Scene Analysis	0	0	0	0	0
(7b.044.SBU) Human Behavior from Insole Sensor Data	0	1	0	0	0

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Project: (7a.001.UL) Fault-tolerance Strategies for Handling Data-streams on Edge-Networks: Application to Smart Building

Phase: Project Update

Project PI: Raju Gottumukkala (UL Lafayette)

Progress Ratings
Great Progress - 1
On Course - 3
Needs Change - 0
Off Course - 0
Abstain - 1

Summary of Responses to IAB Comments

Raju's Response: Thank you for your valuable comments. Your feedback is invaluable.

Questions

- What about edge computing vs. cloud computing reliability?
- Matti Vakkuri (Tieto -)

Response 1: One of the biggest trade-off with Edge vs. Cloud is reliability. Because these devices are on the field, in vehicles, buildings, etc. Failure of the gateway device means losing critical information relevant to making (in some cases) mission critical decisions. Existing distributed platforms that includes middle-ware (bulk synchronous parallel models), application (task level parallelism), buffering are not scalable. The goal is to understand and develop real-world applicable solutions. -Raju

Suggestions

- Real time data needs vs. historical data to be determined.
- Matti Vakkuri (Tieto -)

Response 1: Thank you. The goal is to push historical data to the cloud, which minimizes reliability concerns. -Raju

- The presentation did not discuss strategies for fault tolerance, however the smart building use-case was interesting.
- Michael Lucito (Schumacher Clinical Partners -)

Response 1: The strategies (or innovation) here is a combination of (1) partial-replication strategies at the application level and (2) SDN based management of Mesh network. We have prior results from these in the area of live video streaming. -Raju

Comments

- Great work!
- Matti Vakkuri (Tieto -)

Response 1: Thank you! -Raju

- Great visuals and discussion
- Nicholas Ruiz (Schumacher Clinical Partners -)

Response 1: Thank you! -Raju

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Project: (7a.002.SBU) The Data Voyager - Interactive Visualization of Multivariate Data with Joint Data & Dimension Re

Phase: Project Update

Project PI: Klaus Mueller (Stony Brook)

Progress Ratings
Great Progress - 0
On Course - 3
Needs Change - 0
Off Course - 0
Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

- Suggest connecting with Hunter Moore from UVA about possibly combining the research. Both research topics are very complementary.
- Sumit Shah (CGI -)

Comments

- The novelty of this project may be in jeopardy. The newest version of excel has introduced a very similar feature for tabular data sets.
- Michael Lucito (Schumacher Clinical Partners -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.003.UL) Ontology-based Fast Semantic Indexing for Structured and Unstructured Data in Health Care

Phase: Project Update

Project PI: Satya Katragadda (UL Lafayette)

Progress Ratings
Great Progress - 2
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

SatyaKatragadda's Response: Thanks for the feedback from the IAB

Questions

Suggestions

Comments

- Interested in following the results of this project.
- Michael Lucito (Schumacher Clinical Partners -)

Response 1: Thanks for the feedback. -Satya Katragadda

- I have a lot of confidence in this team and their research
- Nicholas Ruiz (Schumacher Clinical Partners -)

Response 1: Thanks for the feedback. -Satya Katragadda

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.004.DU) Large-Scale Probabilistic Anomaly Detection from Text and Its Application to Medical Records

Phase: Project Update

Project PI: Tony Hu (Project not started) (Drexel)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

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Project: (7a.005.UL_U) A Cyberinfrastructure System for Real-Time Flood Forecasting in Low-Relief Coastal Plain Basins

Phase: Project Update

Project PI: Emad Habib (UL Lafayette)

Progress Ratings
Great Progress - 0
On Course - 2
Needs Change - 0
Off Course - 0
Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

- Recommend a workshop/breakout during the next IAB meeting to build a long term road-map.
- Sumit Shah (CGI -)

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.007.DU) Novel Methods for Data Integration and Information Extraction over Complex Heterogeneous Data

Phase: Project Update

Project PI: Yuan An (Drexel)

Progress Ratings
Great Progress - 0
On Course - 3
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.010.UL) Event Detection and Classification from Live Video Streams

Phase: Project Update

Project PI: Khalid Elgazzar (UL Lafayette)

Progress Ratings

Great Progress - 0

On Course - 3

Needs Change - 0

Off Course - 0

Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

- Recommend you connect with Arie's group in SBU. They are doing similar work in the healthcare domain and techniques such Transfer Learning should be explored to move forward.
- Sumit Shah (CGI -)

Comments

- The work is very promising. Looking forward to continued engagement and participation to move this forward.
- Sumit Shah (CGI -)

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Project: (7a.013.UVA) Privacy Preserving Multi-Party Analytics

Phase: Project Update

Project PI: Steve Boker (UVA)

Progress Ratings
Great Progress - 2
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- This project looks like it has great applicability to many of our projects in the government sector - we'll be reaching out to collaborate. Interested in how this concept can be applied simultaneously across domains and model types.
- William LaBar (CGI -)
- Impressive project
- Nicholas Ruiz (Schumacher Clinical Partners -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.014.UVA) Data-Driven Dynamic Models for Exploring Systemic Risk with Unknown Inputs

Phase: Project Update

Project PI: William Scherer (UVA)

Progress Ratings
Great Progress - 0
On Course - 2
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Excited about the future of this project
- Nicholas Ruiz (Schumacher Clinical Partners -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.016.DU) A Continual Learning Framework for Domain Adaptation and Provenance Tracking

Phase: Project Update

Project PI: Gail Rosen (Drexel)

Progress Ratings
Great Progress - 0
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.018.UL_U) A Comprehensive Data Integrity/Trust Approach for IoT Infrastructures

Phase: Project Update

Project PI: Khalid Elgazzar & Stephen Adams (UL Lafayette & UVA)

Progress Ratings
Great Progress - 0
On Course - 3
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Excited to see cross-university collaboration coming from CVDI. Keep up the good work.
- William LaBar (CGI -)
- Looking forward to our workshop to collaborate and brainstorm ideas.
- Sumit Shah (CGI -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.019.DU) Image Informatics for the Characterization of Molecular Subtypes in Breast Carcinoma Tissue

Phase: Project Update

Project PI: David Breen (Drexel)

Progress Ratings
Great Progress - 0
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.020.UVA) Deep Learning and Adversarial Learning in Credit Card Fraud

Phase: Project Update

Project PI: Peter Beling (UVA)

Progress Ratings

Great Progress - 2

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Most memorable presentation of the day
- Nicholas Ruiz (Schumacher Clinical Partners -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.021.TUT) Early Detection of Myocardial Infraction Using Echocardiogram Images

Phase: Project Update

Project PI: Moncef Gabbouj (TUT)

Progress Ratings
Great Progress - 0
On Course - 0
Needs Change - 0
Off Course - 0
Abstain - 2

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.022.TUT) Unsupervised Color Constancy using Adversarial Learning

Phase: Project Update

Project PI: Moncef Gabbouj (TUT)

Progress Ratings

Great Progress - 0

On Course - 1

Needs Change - 0

Off Course - 0

Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Developing different ways to get better machine learning performance with less data remains important topic for Intel. This project aligns well with this need.
- Jarno Nikkanen (Intel -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.024.TUT) Real-time Data Analytics Using Edge Computing Infrastructure with Application for Smart City

Phase: Project Update

Project PI: Honglei Zhang (TUT)

Progress Ratings
Great Progress - 0
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Impressed with the idea behind this project
- Nicholas Ruiz (Schumacher Clinical Partners -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.025.TUT) Multimodal Data Integration in Intelligent Buildings

Phase: Project Update

Project PI: Jenni Raitoharju (TUT)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.026.TUT) Improving Speech Recognition Robustness

Phase: Project Update

Project PI: Moncef Gabbouj (TUT)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.028.TUT) Co-Botics “ Intelligent Cooperating Robots and Humans ”

Phase II

Phase: Project Update

Project PI: Alexandros Iosifidis (TUT)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.029.TUT) Very Fast Nearest Neighbor Retrieval in High-Dimensional Domains

Phase: Project Update

Project PI: Petri Myllymäki & Teemu Roos (University of Helsinki (TUT))

Progress Ratings
Great Progress - 0
On Course - 2
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

PetriJanne's Response: Overall the comments are positive. In our future presentations, we clearly need to talk more about the applications, and this we can surely do together with our sponsoring company.

Questions

Suggestions

- I would like to see more of the presentation centered around the applications. The technology and PI are solid
- Nicholas Ruiz (Schumacher Clinical Partners -)

Response 1: Thank you, we will take this into account in the future! -Petri & Janne

Comments

- Very ambitious, hoping this continues to go well.
- Michael Lucito (Schumacher Clinical Partners -)

Response 1: Thank you, we hope so too! -Petri & Janne

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Project: (7a.032.UVA) Development of Human and Machine Predictive Maintenance and Care Service Based on Industrial Interne

Phase: Project Update

Project PI: Peter Beling (UVA)

Progress Ratings
Great Progress - 0
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.035.UVA) Improved Decision Making for Autonomous Systems

Phase: Project Update

Project PI: Cody Fleming (UVA)

Progress Ratings

Great Progress - 1

On Course - 1

Needs Change - 0

Off Course - 0

Abstain - 1

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Great presentation and despite not having a working knowledge of this domain, I walked away felling like I learned a lot
- Dominic Gadoury (ADP -)

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7a.039.DU) Development of LSTM Models for Accuracy Enhancement of OCR Systems

Phase: Project Update

Project PI: Ali Shokoufandeh (Project not started) (Drexel)

Progress Ratings
Great Progress - 0
On Course - 0
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7b.040.UNCC) Extending Payroll Data Through Mocr modeling

Phase: Project Update

Project PI: Jean-Claude Thill (Project Not Started) (UNCC)

Progress Ratings
Great Progress - 1
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 1

Summary of Responses to IAB Comments

Questions

- What other data sources (non-public) could be considered?
- Dominic Gadoury (ADP -)

Response 1: Thanks for the question. There are non-public sources of data on businesses (like the NETS database), as well as databases on resident populations. Microsample census data can also be accessed by only after a lengthy process to access data in a secured facility. There is typically a hefty subscription fee for access to all these. -Jean-Claude Thill

Suggestions

Comments

- Project is just starting so no observations on status. Would love to see how the research topic might be able to be generalized to a topic that might be applicable to additional IAB members
- William LaBar (CGI -)

Response 1: Thanks for the feedback. I'd love to chat with IAB members to identify potential areas where the process we'll developed can be transferred to other data analytics use cases. Certainly as discussed yesterday, once the enhancement is done, a number of interesting research topics can be advanced, particularly in relation to environmental justice, health outcomes, etc. -Jean-Claude Thill

- Great presentation of objectives and importance of this project that has yet to kickoff.
- Dominic Gadoury (ADP -)

Response 1: Thanks for the feedback! We are very excited about the analytic challenges and the uses for the enhanced data. -Jean-Claude Thill

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Project: (7b.041.SBU) Medical Insurance Claim Prediction

Phase: Project Update

Project PI: Minh Hoai Nguyen (Stony Brook)

Progress Ratings

Great Progress - 0

On Course - 2

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7b.042.SBU) Immersive Data Visualization

Phase: Project Update

Project PI: Arie E. Kaufman (Stony Brook)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7b.043.SBU) Dynamic Scene Analysis

Phase: Project Update

Project PI: Arie E. Kaufman (Stony Brook)

Progress Ratings

Great Progress - 0

On Course - 0

Needs Change - 0

Off Course - 0

Abstain - 0

Summary of Responses to IAB Comments

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CVDI (University of Louisiana at Lafayette) - November 14th, 2018

Project: (7b.044.SBU) Human Behavior from Insole Sensor Data

Phase: Project Update

Project PI: Dimitris Samaras (Stony Brook)

Progress Ratings
Great Progress - 0
On Course - 1
Needs Change - 0
Off Course - 0
Abstain - 0

Summary of Responses to IAB Comments

Questions

Suggestions

Comments

- Numerous applications to care of aging population
- Nicholas Ruiz (Schumacher Clinical Partners -)