Project Template

Project Name

Lead/Mentor: *Faculty Lead*

Contributors: *Student Contributors*

Current Funding:

Future Funding:

IRB #

RMID

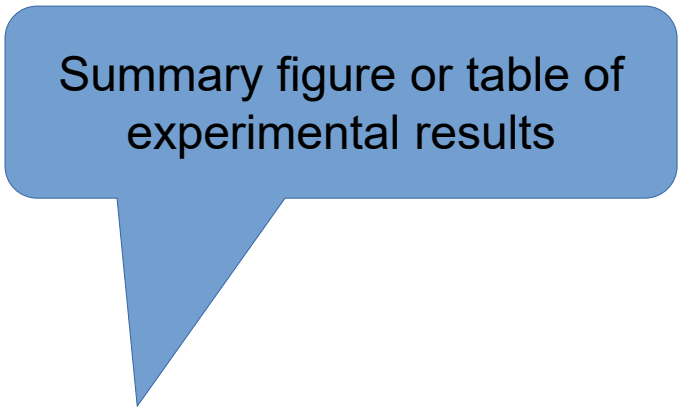
SPARCRequest

- (Brief summary of project domain, use case, etc.)

1) Important question #1?

2) Import question #2?

Project Experiments



1) Next step?
2) Next question to answer?
3) Next experiment to run?

Resources

Where do these slides live?
What code repositories are used?
What datasets are used?

Acknowledgements

Lead/Mentor: *Faculty Lead*

Contributors: *Student Contributors*

Past Contributors: *Student Contributors*

Current Funding:

Future Funding:

- Pictures, logos, grant IDs, whatever needs to go at the end of papers and talks

Publication Template

Publication Example

Title

Project/Domain:

Author List:

Non-Author Acknowledgements:

Funding Acknowledgements:

Intro / Context

- In a world where....
- We tried...
- And we found...

Methods

1) Data description
2) Model description
3) Evaluation approach

Summary figure or table of experimental design

Results

1) Important take-aways

Summary figure or table of experimental results

Take-Aways

1) Limitations
2) Key take-aways

1) Next step?
2) Next question to answer?
3) Next experiment to run?

Project Example

ARDS / VDRF Phenotyping

Lead/Mentor: Charles Terry, Paul Heider

Contributors: Joshua Geller

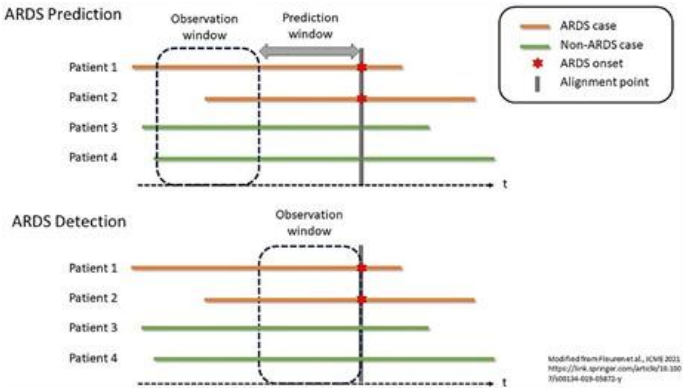
Current Funding:

Future Funding:

- R21 on Model Re-Use Submitted
- R21 on Model Re-Use Submitted (both to be reviewed March 2026)

- Acute Respiratory Distress Syndrome (ARDS) is frequently underdiagnosed due to interobserver variability in radiographic interpretation

1) How predictive of ARDS are CUI imaging features from radiographic reports in patients with ventilator-dependent respiratory failure (VDRF)?
2) Can we more accurately cluster ARDS and/or VDRF patients into clinical meaningful subphenotypes?



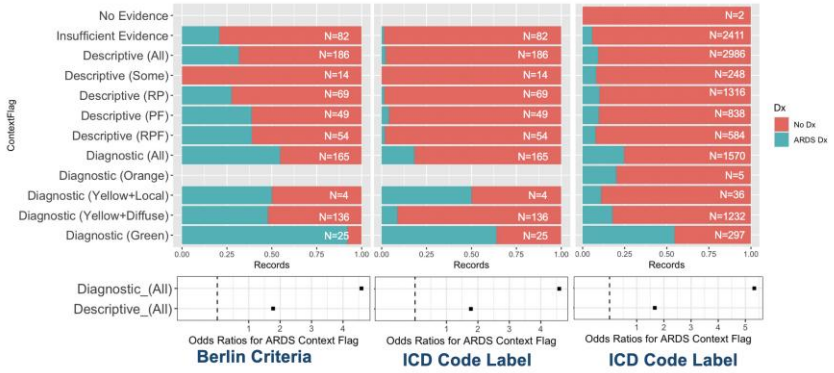
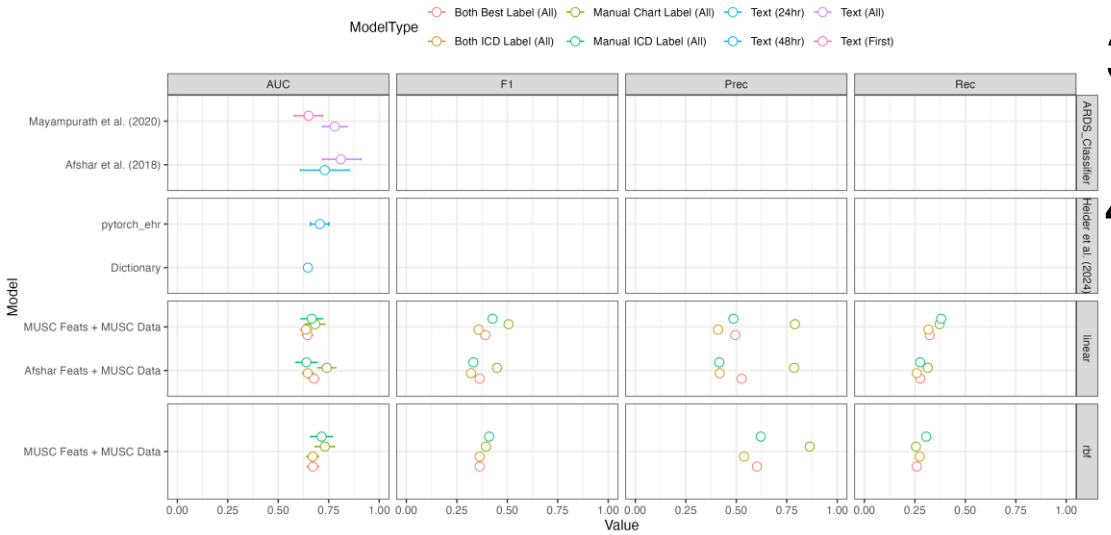


Figure 1. Diagnostic and Descriptive CUI Groups Are Predictive of ARDS Using ICD and Berlin Criteria Assessments. Diagnostic CUIs were more predictive overall compared with Descriptive CUIs in ICD and research team-labelled ARDS cases. Green-grouped Diagnostic CUIs were the most predictive.

CUI Categories	Clinically Recognized ARDS	Met Berlin Criteria	Total	Odds Ratio
Descriptive	4	59	186	0.048
Diagnostic	30	90	165	0.156
Insufficient	1	17	82	0.049

Table 1. Under-recognition of ARDS Prevents Accurate CUI Label Assessment. ICD Billing Diagnosis Codes (J690, J810) were used as a surrogate for clinical recognition of ARDS compared with research team evaluation of Berlin criteria.



RF Experiments

1) Can we replicate Afshar et al's SVM phenotyping model?
2) How predictive are our models at different time scales?
3) How can we create multi-modal models?
4) Can we add explainability to our model outputs?