M Gmail   **Kavin Saravanakumar <ksksmart19@gmail.com>**

Research Review Request

Purohit, Prafull <ppurohit@bnl.gov>   Sat, Oct 4, 2025 at 1:20 AM
To: Kavin Gmail <ksksmart19@gmail.com>
Cc: "Rumaiz, Abdul" <rumaiz@bnl.gov>

Hi Kavin,

I'm impressed by the amount of work you have put into this project. Your two-model approach to compare the association of autoimmune conditions and cardiovascular diseases is really good.

I have a couple of minor suggestions/questions:

Suggestions:
- add reference to the figures in the text and figure captions
- Try to move figures close to the corresponding text

Questions to keep in mind for future improvements:
- Which method performs better in case of an anomaly in the data? Such incidents are not uncommon in the medical datasets due to measurement errors.
- It would be interesting to see how much regression quality changes with the number of CRP and LDL data points.
- Have you thought about what role a person's age plays in the association of autoimmune conditions and cardiovascular diseases?

Good luck!

-Prafull

From: Kavin Gmail <ksksmart19@gmail.com>
Sent: Tuesday, September 30, 2025 7:54 PM
To: Purohit, Prafull <ppurohit@bnl.gov>
Cc: Rumaiz, Abdul <rumaiz@bnl.gov>
Subject: Re: Research Review Request

This Message Is From an Untrusted Sender
You have not previously corresponded with this sender.

Ok, thank you sir.

> On Sep 30, 2025, at 6:21 PM, Purohit, Prafull <ppurohit@bnl.gov> wrote:

Hi Kavin,

Thanks for sharing the paper. I will look into it and get back to you soon.

Best,
Prafull

From: Kavin Gmail <ksksmart19@gmail.com>
Sent: Tuesday, September 30, 2025 11:21 AM
To: Rumaiz, Abdul <rumaiz@bnl.gov>
Cc: Purohit, Prafull <ppurohit@bnl.gov>
Subject: Re: Research Review Request

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Ok, that sounds great. Thank you so much sir.

On Sep 30, 2025, at 7:32 AM, Rumaiz, Abdul <rumaiz@bnl.gov> wrote:

Hi Kavin,

Nice to meet you. I will certainly read through your paper. I am also copying this email (with your paper) to my colleague Dr. Prafull Purohit, who is an expert in AL/ML. His inputs would more insightful.

Regards

Abdul K. Rumaiz

From: Kavin Saravanakumar <ksksmart19@gmail.com>
Sent: Monday, September 29, 2025 8:25 PM
To: Rumaiz, Abdul <rumaiz@bnl.gov>
Subject: Research Review Request

This Message Is From an Untrusted Sender
You have not previously corresponded with this sender.

Hello sir,
My name is Kavin Saravanakumar, and I am a 12th grader at Heritage High School in Frisco, Texas. I recently did a poster on a research study about predicting autoimmune diseases with machine learning models. From that study, I modified the research question and expanded the topic of this research. This project essentially looked into specifically what extent machine learning can predict specific autoimmune trends in cardiovascular diseases, using inflammatory markers.

I would like to send my paper's draft to get a review on the fundamental scientific concepts. I believe that professional feedback on the research would help me improve my work. The computational methods and analysis could be brought to a better quality through some useful inputs.

I am linking the PDF to the paper to this email. Please take a look at it sir.

Thank you for your time and consideration.

Sincerely,
Kavin Saravanakumar
ksksmart19@gmail.com
214-218-0965
<Machine learning investigation on autoimmune conditions part of cardiovascular risk (1).pdf>