Homework-1: AAE-590 due 2/10/2025 by 11:59 PM

25 points
As discussed in class fill out your data sheet in the attached powerpoint. Also submit link for a folder that contains microstructure images for all these points. Please note that in your microstructure images you can place holes as you like.

25
Go to materialscloud.org or NASA PSI dataset and find most relevant (your choice) dataset for your problem that you want to address in this course. We had discussion about this in lecture 2 and lecture 4. Since we have microstructure data I am interested most in high throughput experimental data as well. But you choose the data you want to work on. Create a directory folder and provide a link with submission. Add a readme file in the folder.

20 points
We have also uploaded datasets for the same problem from two other sources.
Comment on data variability of data from provided dataset vs your own data set.

20 points
Comment on which data engineering (normalization/scaling/transformation/imputation etc.) method you need to smoothen out yours and provided data.

10 points
Summarize data engineering work done in this paper: (also uploaded with homework)
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4331917
Compare with your proposed approach.