Material Advantage

Meeting: 3/5/2021

Meeting time: [11:00 – 11:30] am

Key Notes:

* Irmak Sargin presented some of the research she does
* Materials Informatics
	+ What and Why?
		- Field of study that applies the principles of informatics to materials science and engineering to better understand the use, selection, development, and discovery of materials
		- Machine learning to predict high-dimensional data
		- What do we need, better materials, and we needed it yesterday
		- Supervised Learning
			* Classification and Regression
		- Unsupervised Learning
			* Dimensionality Reduction and Clustering
	+ Challenges
		- Datatype: Heterogeneous, extensive custom engineering required
		- Data volume: Small
		- Domain Knowledge: Physics, thermo, kinetics
		- Interpretability: Required
		- Uncertainty quantification: Required
		- Goal: Extrapolating the model beyond the data set for materials discovery