I have worked with a company that provides warranty repairs for large industrial HVAC systems. Parts to repair these machines are large and expensive so they cannot be carried to each location. This results in each repair requiring two visits, one to identify the issue and another to fix it. This is costly and annoys the customer.

Discussing this with the company, it is possible to identify about 60% of the issues simply by observing discrepancies on the machine. It is critical to be able to discriminate minor discrepancies. In addition, each machine has a unique combination of components. The SimCLR approach could be used to generate data to train a model to identify the cause of issues.

I found the article to be well organized and in the typical organization of an academic paper. There is always an Abstract that gives the reader enough information to determine if they are interested in reading the paper. It is interesting to read the abstracts of papers like this to get an idea of what level of understanding is expected. In this case, the authors mention ‘Memory Banks’, ‘Contrastive Self Supervised Learning’, ‘ImageNet’, and ‘ResNet-50’ for example. Before I started reading the paper, I read about these items to make sure that I was up to speed.

The rest of the paper has an Introduction, sections on various details, and the last two sections are Related Work and Conclusions. This structure made it easy to follow. This paper also had a significant section of appendices. Some of the information in the appendices seemed to be relevant to the paper. For example, the various batch sizes used. It made me wonder how they selected to put information in the appendices.