Tech Insights – Notes and thoughts

Breast Cancer Classification using Support Vector Machines

I started with this one as it appears to actually the base for the data I’m using in the projects I chose, I didn’t see it before beginning the projects but it’s really interesting to see it as I’ve been working with the dataset.

It was really neat to see how they explain the data comparatively, and I especially appreciated their perspective on modelling. In particular I hadn’t viewed or really defined modelling from a more day to day standpoint, so when I read:

“All humans naturally model the world around them.

Over time, our observations about transportation have built up a mental dataset and a mental model that helps us predict what traffic will be like at various times and locations. We probably use this mental model to help plan our days, predict arrival times, and many other tasks.”

It really put in my mind a different way to view the learning we have been doing which I appreciate. I know coming in I felt concerned a bit how I would integrate the practical applications we are using with a strong math base when my own math base didn’t feel so strong, however there have been so many tools that just understanding what’s underneath and seeing how the concepts themselves relate to things we and our brains do all the time makes it really exciting rather than so intimidating!

I feel that learning the concepts and then from there being able to use tools to grow knowledge based on them is something described and defined in parts of this article that make it very relatable personally and help me to focus on those rather than just the formula getting us there.

Also seeing the practical applications of that knowledge in predicting, where what we are learning is how to use different data (or data in a different format) to extrapolate and predict (with varying margins of error) to help us make decisions just as we do in our everyday lives.

Understanding the difference between model prediction and model inference was also very well defined here, how we see how things relate to each other (or IF they relate to each other even) as inference vs trying to see the potential outcome of our decisions.

In summary I’ve gained a new perspective a bit in that what we are learning to do in machine learning largely, is using computers to help us on a larger scale do what our own brains do all day every day with the information we are given, but on a much larger scale, and most likely a more accurate scale, as our memories are not so perfect and we also as humans tend to add some personal bias rather than just statistical bias.

I’m looking forward to reading the other articles as well!