**Article 1:**

Vaughan, N. & Gabrys, B. (2016). Comparing and combining time series trajectories using Dynamic Time Warping. *Procedia Computer Science, 96,* 465 – 474. doi:10.1016/j.procs.2016.08.106

A screenshot of a cell phone

Description automatically generated

**Notes:**

* This article describes the Dynamic Time Warping algorithm, one of the most popular algorithms to compare trajectory data
* The algorithm can be used to compare two different trajectories of time series data (meaning data that has a spatial and temporal depth).
* Dynamic Time Warping algorithms return similarity metrics between two trajectories, allowing for more advanced comparison than simple Euclidian distance comparison.

**Significance:**

* I can use this algorithm as a similarity metric to compare my data, since my trajectories consist of points of “temperature centers” with a spatial depth (x and y within the disc) and a temporal depth.
* I can also use the similarity metric from the Dynamic Time Warping in the optimization process as the measurement function that gives me the “loss” of my optimization, or the value that will be measured while minimizing the print parameter variables.

**Article 2:**

Studer, M & Ehrig, F. (2014). Minimizing part warpage in injection molding by optimizing wall thickness distribution. *Advances in Polymer Technology, 33*. doi:10.1002/adv.21454