Laboratory of Innovation in Transportation

44 Gerrard St East,

Toronto, ON M2L 1K6

January 25, 2020

**Predictive Pedestrian Model (PPM): Version 0.**

The first deliverable aiming at finding the integration methods consists of the following files:

1. a python function and its corresponding PKL file as the model (BasicModel.py and Model\_V0)
2. PedModel.py: A simple python that reads and runs Model\_V0 with a specified input
3. The docker file to run PedModel.py

This document presents a short summary of the files submitted to !iMPORTANT.

1. **Base Model:**

The base function in charge of prediction is provided in BasicModel.py, and saved as a PKL file Model\_V0). As per the statement of work, the function is a simple function, developed for the purpose of integration issues. Given a pedestrian is located at *(X0,Y0)* at time *t* and is directed towards the final destination of (*Xn,Yn),* Model\_V0 predicts the location of the pedestrian at time *t + ∆* assuming a constant speed of *S*. Variables that needs to be given to the model are *S, ∆t, (X0,Y0) and (Xn,Yn).* The model is saved in a PKL file provided (Model\_V0.pkl)

1. **Implementation model**

To run the base model, PedModel.py is provided. Within the code, two sample dictionaries are defined as context and position, which are to be replaced by the dictionaries provided by VTD scale in the next iterations. The format of the dictionaries are as followed:

The function returns a dictionary object as requested and prints the next location.

A docker files is also provided running PedModel.py.