Unreal Programmer Task

For this task I immediately thought about Tony Hawk Pro Skater which I used as a reference for the mechanics.

(~2 hour)
The first part for me was the pushing and turning, I focused on skater momentum and realistic acceleration. For this on a SkaterCharacter class I coded some really simple movement and turning behavior and tweaked the MovementComponent on the Character blueprint that extends from this class.

(~4 hours)
For the Jumping I wanted to create a jump charging similar to Tony Hawk Pro Skater so on the SkaterCharacter class I created a bool (ChargingJump) that added vertical velocity to a certain point depending on how much time you hold the spacebar. So when you release you get different heights depending on how long you charged the jump (1 seconds for max height). Also I wanted to make sure that depending on how you land you maintain different amounts of momentum. I did this using a dot product on the vector of the movement velocity and the player orientation .This opens the possibility to later add falling from the skateboard when landing sideways.

(~1 hour)
The one in charge of the input is the SkaterController class that calls move and jump related methods on the SkaterCharacer class

(~3 hours)
After the movement was done I worked on adding the animations, set up the AnimationBlueprint and using two variables from the SkaterCharacter class I made (Pushing and ChargingJump) I made the Animation Blueprint to react to what the player is doing.

(~3 hours)
All the other features were pretty straightforward such as creating the widget, adding a scenario and zones to score (score is stored in a SkateGameState class)

I would evaluate my performance as an 8/10 given the context, it has good scalability for either new features or even multiplayer. I think it is a good outcome for a 48 hour deadline.