

## Robot\_Parameters

+\_Robot\_name : std::string;  
- \_dh\_alpha : std::vector<double>;  
- \_dh\_d : std::vector<double>;  
- \_dh\_a : std::vector<double>;  
- \_Robot\_angles : std::vector<double>;

+get\_dh\_parameters() std::vector<double>  
+get\_Robot\_angles( ) : std::vector<double>  
+set\_Robot\_angles(std::vector<double>): void

## Inverse\_Kinematics

-\_eff\_angles : std::vector<double>;  
-\_eff\_position : std::vector<double>;

+Inverse\_Kinematics()  
+get\_eff\_angles( ) : std::vector<double>  
+get\_eff\_position( ) : std::vector<double>  
  
+cal\_TF(): std::vector<double>  
  
+set\_eff\_angles(std::vector<double>): void  
+set\_eff\_position(std::vector<double>): void  
  
+solve\_ik(): std::vector<double>

## Forward\_Kinematics

- \_dh\_Matrix():std::vector<double>;

+solve\_fk():std::vector<double>