## **Class Diagram**

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## AckermanKinematicModel

- wheelBase : double- axleWidth : double- steeringAngle : double- carVelocity : double- carState : Point3f

+ getWheelBase() : double
+ getAxleWidth() : double
+ getSteeringAngle() : double
+ getCarVelocity() : double
+ getCarState() : Point3f
+ setWheelBase(double I) : bool
+ setAxleWidth(double w) : bool

+ setSteeringAngleAndCarVelocity(Eigen::Vector2d controllerOutput) : bool

+ setCarState(Point3f state) : bool + calcAckermanParameters() : Point3f + checkAngleConstraints() : bool