Chapter 7: "simplest" bicge
Key addition the car model $\Rightarrow$ sill of the vehich
assumptions:


- no side slip
- $U$ is constant

$$
\begin{aligned}
& - \text { angles: } \delta_{r}, \delta_{f}, v \\
& -R \gg \text { ats }
\end{aligned}
$$

$$
\begin{aligned}
& R=\frac{a+b}{\delta_{f}-\delta_{r}} \\
& \bar{V}_{f}=U_{\imath}^{\prime}+V \hat{j}^{\prime}+r a \hat{\jmath}^{\prime} \\
& \bar{V}_{r}=U_{\imath}^{\prime}+V j^{\prime}-r b \hat{\jmath}^{\prime}
\end{aligned}
$$

$$
r \simeq \frac{u}{R}=\frac{u\left(\delta_{f}-\delta_{r}\right)}{(a+b)}
$$

$$
\tan \left(\delta_{f}\right)=\frac{V+r a}{u} \approx \delta_{f}
$$

$$
\tan \left(\delta_{r}\right)=\frac{V-r b}{u} \simeq \delta_{r}
$$

two
point
thereon
no slip

