Given a current-carrying surface, it makes sense to ask what the component $B_{\perp}$ of the magnetic field is perpendicular to the surface, which is $B_{\perp} = \vec{B} \cdot \hat{n}$, where $\hat{n}$ is the unit normal to the surface. The parallel component is more subtle, since there are several directions parallel to the surface. However, for a current-carrying surface there is a preferred direction in the surface, namely the direction of the current $\vec{K}$. The component in the surface and parallel to the current is called $B_{\parallel}$, and the component in the surface but perpendicular to the current is called $B_{\perp}$. 