3. $f(x) = \arcsin x + \arctan x$

$$f'(x) = \frac{1}{\sqrt{1-x^2}} + \frac{1}{1+x^2}$$

$$= \frac{1 \cdot (1+x^2)}{(1+x^2)\sqrt{1-x^2}} + \frac{1 \cdot \sqrt{1-x^2}}{(1+x^2)\sqrt{1-x^2}}$$

$$= \boxed{\frac{1+x^2+\sqrt{1-x^2}}{(1+x^2)\sqrt{1-x^2}}}$$