⭐ Sketching fields ⭐

Sketch the following electric field:

$$\vec{E}(\vec{r}) = \frac{p}{4\pi\varepsilon_0 r^3}\left(2\cos\theta\,\hat{r} + \sin\theta\,\hat{\theta}\right)$$

Some things to think about:

What direction does it point at points on the z-axis? On the +/- x axis?

How does it behave far away?

What happens near the origin?

What's the physics?