Abstract: Let $F$ be a field. A Symplectic alternating algebra over $F$ is a triple $(V, (\ , \ ), \cdot)$ where $V$ is a symplectic vector space over $F$ with respect to a non-degenerate alternating form $(\ , \ )$ and $\cdot$ is an alternating bilinear and binary operation on $V$ such that the law $(u \cdot v, w) = (v \cdot w, u)$ holds. These algebraic structures have arisen from the study of 2-Engel groups but seem also to be of interest in their own right with many beautiful properties. We will give an overview with a focus on some recent work on the structure of nilpotent symplectic alternating algebras.