In array imaging we want to determine the location and reflectivities of small scatterers (targets) from recorded backscattered fields. I will describe how we can combine the underlying sparsity of the problem with tools from compressive sensing to improve target resolution and the ability to detect weak targets embedded in noise. Our analysis also applies to moving targets. Array imaging becomes even more challenging in the presence of clutter. I will discuss how compressive completion, a careful combination of compressive sensing and matrix completion, allows us to separate targets from clutter.