Automata learning is a technique that has many applications in verification and systems’ modeling. In this talk I will review one of the classical algorithms, Angluin’s algorithm using algebraic and coalgebraic tools. This will provide a new perspective on the correctness of the algorithm and, more interestingly, will unveil connections to testing and minimization. This talk is based on joint work with Matteo Sammartino and Gerco van Heerdt.