Given two simple closed curves alpha and beta intersecting many times on an orientable surface S, we are interested in studying the minimal degree of a finite cover of S such that there is a lift of alpha disjoint from a lift of beta. In joint work with Tarik Aougab and Sam Taylor, we use the geometry of hyperbolic 3-manifolds to obtain lower bounds on this degree in terms of curve complex distance between the curves alpha and beta. After describing some of the techniques we use, I will highlight an interesting application of our work that gives lower bounds on the degrees of special covers for certain cube complexes associated to surfaces. (Received September 25, 2017)