It is widely known that there are not enough Computer Science graduates to fill Computer Science jobs. This paper explores why students are not electing to study Computer Science, even though there is a high demand for the field. An anonymous survey was administered to undergraduate students at a Midwestern university. The survey included a wide range of questions addressing impressions of what computing professionals do, and students’ actual computer science educational background (high school and college). Basic demographics were also collected. The study indicated that at least one-third of students do not have an accurate comprehension of what computing science professionals do. The study also shows that exposure to Computer Science in high school often did little to affect students’ perceptions of the field. It was shown that females have a stronger tendency to regard computer science as “boring,” even when they have taken no computer science courses and have no experience on which to base their opinions. This study examines many correlates from the data and draws conclusions concerning the need to improve computer science education in high school and undergraduate settings, with the ultimate goal of increasing computer science enrollment and meet the hiring demand. (Received September 16, 2014)