

There's an App (Camp) for That: Attracting Female High Schoolers to Computing

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Computing-based programs across the nation have seen a gradual decrease in enrollment by female students from about 18% in 1994-95 (the first year that the Taulbee survey reports on bachelor's degrees by gender), to about 11% now. Given the steady decrease in females entering and completing computer science degrees, it has become necessary for recruiting efforts to be more engaging. This presentation discusses a successful one week college-immersion, residential camp centered on mobile application development for female high school rising sophomores and juniors. The purpose of the camp was two-fold: to introduce high school females to the field of computer science so they have the knowledge to seriously consider computer science as a major, and to encourage high school women to attend college. The camp was developed, run, and managed by four professors from three different universities, four women counselors from two different universities, and a community volunteer with a CS Ph.D. The camp had activities for five days and the campers were engaged from sunrise to sunset. Campers were introduced to the field of computer science, application design and development, and mobile programming. In addition, campers learned about how CS can be used to solve problems through mobile applications, specifically an ethogram app for biologists and zoologists to record animal behavior. The campers met with scientists and Cincinnati Zoo employees to learn how ethograms are used. The campers spent a day at the zoo, met technical women in a speed mentoring session, developed iBooks to record their week's adventures and app design, and presented their results. Key features that contributed to the camp were the zoo application, use of social media to keep campers and their parents informed on the activities, speed mentoring, and dedicated counselors. Twenty five campers attended the camp and of those twenty-five, ten have volunteered to continue development on the app during the school year. An evaluation of camper attitudes showed a statistically significant change in attitudes towards understanding of what computer scientists do, and towards confidence in attempting computer science.