

Project Title: Voice Controlled Car System

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### **Abstract**

Voice controlled car systems provide the ability to the driver to adjust the controls of the car without any distractions. The driver can turn on music, make calls or adjust volume while driving at the same time. In order to implement this on our FPGA we will design a speech recognition module that is able to detect individual words that are spoken by the speaker. The speech recognition system will compute the DFT using a FFT module. After this computation, the FFT will be compared to that of the trained samples that will be recorded previously. Once the word is identified, the command will be executed in the simulated car system, which will be displayed on a computer screen using a VGA. Possible commands will include starting the car, listening to music or making calls. A possible extension would be to add an additional layer of security to the system that would identify the person speaking as well as the command.