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Motion Controlled Driving Game

Abstract

"You are a tired computer engineer coming home from work. Due to extreme sleep deprivation, the world around you looks strange…"

We would like to design a game that uses motion tracking, graphics, and audio effects. The game is a augmented reality driving game that will be displayed using graphics generated by the FPGA onto the computer monitor. The user is inside the car and can control how the car moves by holding out their two hands and moving them around as if they are holding the steering wheel. There will also be brakes and acceleration pedals for the feet. We can use a VGA camera or an accelerometer to track the movements of the hands and feet. The goal of the game is to reach the final destination without hitting any objects on the road. Sound effects will be played when you crash. Game logic may include assessing how well the driver drove i.e. not crashing into many obstacles.