

SmartBell
(Technical Report)

Coke and Obesity in the United States
(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Electrical Engineering

by

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Preface

How can the incidence of overweight in United States be reduced?

How can we provide immediate and critical performance feedback to weightlifters? The capstone team created a small device, the SmartBell, capable of collecting and displaying weightlifting statistics to evaluate the lifter's stance and physical performance when it is attached to a barbell. By designing and manufacturing a printed circuit board (PCB), soldering integrated circuits and circuit elements onto the PCB, writing the software logic to detect and analyze form and statistics, and testing the functionality of the device with volunteers, the research team delivered a prototype optimized for mass-production.

Since 2005, how has Coca-Cola defended itself from accusations that its products cause obesity? The Coca-Cola Company is one of the largest beverage companies in the world. Its flagship brand, Coke, is one of the best-selling carbonated soft drinks. Critics of Coca-Cola have contended that Coke's sugar, additives, and sweet taste may contribute to the high national obesity rate in the U.S. To defend Coke, Coca-Cola launched healthier products, collaborated with health advocacies, used celebrity branding and preemptive advertising strategies, funded health research groups, and lobbied regulatory agencies. The case illustrates how scientific research is influenced by the material interests of its funders.

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