

Shake Power Bank  
(Technical Report)

Technology in the Workplace: A Balance of Power  
(STS Research Paper)

An Undergraduate Thesis Portfolio  
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Bachelor of Science in Mechanical Engineering

by

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How is technology being integrated into everyday life? At their best, technological advances can improve efficiency and simplify processes, but technological innovations often introduce new problems.

How can human motion recharge batteries? By using electromagnetic induction to generate power, the research team created a prototype of a shake power bank that charges any USB-connected device through vertical movement. A magnet inside passes through coils, charging the battery, which in turn charges the USB device. It is portable and small; it can be easily held and stored to better support active schedules.

How are employers and employees competing to shape the workplace norms governing personal device use? Traditional work spaces do not always welcome personal device use. Workplace rules restricting personal device use can induce resistant or evasive behavior among employees. Devices can be an obstacle to an efficient work environment, or a source of distraction, but they are marketed as tools to help productivity. Employers and employees often disagree about optimum personal device use at work.

## **List of Contents**

1. Preface
2. Technical Report: Title of Technical Report
3. STS Research Paper: Title of STS Research Paper
4. Prospectus