

Managing Anxiety through Mobile Application Training Suites
(Technical Report)

The U.S. Nuclear Energy Debate
(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
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Bachelor of Science in Computer Science

by

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Preface

How can high-tech/low-tech hybrids better meet needs than high or low tech alone? In efforts to serve public needs from mental health to energy, high-tech approaches are often favored. Instead of abandoning low-tech, incorporating it into high-tech systems can increase their success.

How can a mobile application training suite relieve the user's anxiety? My computer science capstone team worked with MindTrails, a University of Virginia research initiative, to create an anxiety training mobile application. The MindTrails website offers training to help users prevent anxious thoughts, but to improve user retention, MindTrails seeks a new mobile app. The research team used React Native and Flask to build the mobile app for iOS and Android platforms. We sought to resolve accessibility problems through storing user progress locally and utilizing notifications to retain users that are at risk of abandoning the program.

How do energy regulators, nuclear power companies, climate activists, and renewable energy proponents compete to influence U.S. nuclear policy? Nuclear power, non-nuclear alternatives such as renewables, and fossil fuels are evaluated by criteria including carbon emissions, cost, and risk, influencing policy makers. Nuclear energy interest groups advance their agendas by conducting and publicizing research relating to these criteria. Nuclear energy opponents highlight incidents such as the Fukushima nuclear reactor meltdown and hazardous nuclear waste to damage trust in nuclear power, while proponents highlight nuclear energy's economic viability and low carbon emissions to present it as a strong alternative to fossil fuels.

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