REVOLUTIONIZING FOOD DELIVERY SERVICES WITH HOME COOKED MEALS

INCREASING CONSUMER SAFETY FOR FOOD SERVICE WEB APPLICATIONS BY ANALYZING GOVERNMENT REGULATIONS

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SOCIOTECHNICAL SYNTHESIS

Online food delivery applications provide families with convenient meals; however, these applications need to follow government regulations and implement additional safety precautions before consumers can use them. The technical capstone project implemented a food delivery web application for home-cooked meals, called HomeEats, in order to provide customers with convenient and healthy meal options as opposed to fast food and pre packaged meals. Food delivery web applications inspired the STS research, which used Callon's Actor Network Theory (ANT) to analyze health safety regulations for home-based businesses, such as the at-home chefs working for HomeEats. The STS research helped to develop a solution to improve food and health safety for a platform such as HomeEats by examining other food industries' practices.

The HomeEats platform provides customers, chefs, and the site administrator with various features that make ordering and delivering home-cooked meals to customers a convenient experience. Providing a convenient customer experience is crucial because consumers have been found to value time over money and health; therefore, consumers must be able to order nutritious at-home meals with ease. Customers can begin ordering food once they have created an account. To increase food safety, site administrators must approve at-home chefs applications, which require a kitchen license and cook permit before chefs can use the platform. The site administrator must also approve or deny a chef's application for a new dish in order to stay true to the main goal of the platform, to promote healthy meals with convenience.

The capstone team successfully implemented the HomeEats platform using the Django Python framework as the main structure. Through testing, the team found that customers can create an account, order their first dish, and complete the checkout process in about five minutes.

From the cook's perspective, it also takes less than five minutes to apply for an account, not including the time it takes the administrator to approve the cook. After approval, it will take less than five minutes for the cook to create their first dish on the site and begin taking orders. For the administrator, the features are instantaneous, and they have 24 hours to approve cooks. These results show the efficiency and speed of the platform which in turn emphasizes the HomeEats' ease and convenience.

The STS research investigated health and safety regulations for food service applications in order to understand the current laws in place and find other ways for companies, such as HomeEats, to increase food safety. Promoting health safety for food products would help to protect customers from harm and protect the company itself from legal problems. Government agencies, particularly the Food and Drug Administration (FDA), United States Department of Agriculture (USDA), provided reports and guidelines to describe safety rules that home-based businesses must follow. The Food and Drug Administration further detailed the registration process for home-based businesses. Reporters from esteemed newspapers and magazines, The *Washington Post* and *The Atlantic,* provided specific cases of food safety problems in the past and ways the government enacted laws to prevent history from repeating itself. The STS journal *Technology and Culture* and various nutrition and food law journals presented ways that other food industries implemented hygienic and safe practices; from there, these practices could be applied to food service applications and home-based businesses.

Results from the research showed that food businesses need to follow regulations from the Food and Drug Administration and local and state agencies, especially when registering the business. Based on current practices from brick-and-mortar restaurants, the research showed that

random health inspections help chefs to keep a cleaner kitchen since they can't prepare for a specific date. Furthermore, requiring chefs to post their inspection grade would help to keep them personally accountable by correlating their grade with their business's financial success. Online food platforms often implemented a customer review feature which gave other customers an authentic assessment, helping them to decide to order from a specific restaurant or not. Engineers have further used customer reviews to filter bad results so that site administrators can flag restaurants with bad reviews.

The technical project created a new way for consumers to eat healthily by providing a convenient, home-cooked meal delivery service.The STS research identified ways that the government currently promotes food safety and discovered features and techniques that companies use to further food safety beyond the law. Together, the technical project and STS research worked to create an efficient, safe, and ethical food delivery application.

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