# Survival Analysis of iFixit's Online Question and Answer Forum

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## **iFixit**

- ▶ Founded in 2003 by two engineering students here at Cal Poly
- ▶ Provides over 30,000 free repair guides
- Sells specialized tools/parts needed for repair



Rep: 71

# Touch ID not working after screen replacement

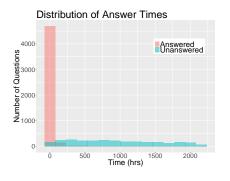
Simple to do, about 20 mins, but Touch ID Isn't working as some others mentioned. I wondered if a fresh instal might help? When I go into "Settling" and "Touch ID" to turn on, it tells me "Failed- Unable to complete Touch ID setup. Please go back and try again." Any ideas, not a deal breaker, I guess it beats picking glass out of the side of my face when trying to use the phone!

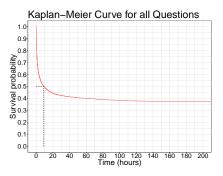






### The Data





- ▶ 7,760 questions posted between April 8, 2017 to July 7, 2017
- ▶ 63.8% recieved an answer by the download date
- ▶ Median survival time, the time at which 50% of the questions in the data recieved an answer, is 9.16 hours

## Methods

- Used text mining and string manipulation techniques to create variables
- ▶ 5-fold cross validation: 5 training and test data sets
- Assessed performance metrics
- Stratified on the time of day the question was posted
- Included splines on quantitative variables like the average length of a question's tags

### Results

- ► r-square = 0.155
- Interpretations of coefficients:
  - ▶ Estimated hazard of receiving an answer is 155% higher (95% CI (131.1%, 182.8%)) for questions pertaining to Apple products than the hazard for questions about Android and Other Phones, controlling for other predictors.
  - ▶ Estimated hazard of receiving an answer is 31.3% higher (95% CI (22.3%, 40.8%)) for questions with titles that end in a question mark than for those without, controlling for other predictors.

#### Limitations

- Low predictive power
- More categorical variables than quantitative
- Inconsistent data there aren't any rules defining how a question should be asked
  - Incorrect use of the tagging system: "someone sat on it :(", "everything is wrong"
  - Incorrectly defining the device: "Turtle Beach Ear Force Xmy grandson chewed through the wire while we was playing it's brand-new is there anyway I can have it fixedO One"