1135-62-1451 **Emily Nystrom*** (emily.nystrom@navy.mil). *Applications of Random Forests for Modeling Obsolescence.* Preliminary report.

Machine learning offers a flexible, data-driven framework that can be tailored to study time-to-event data. Compared to traditional methods for modeling temporal processes, machine learning requires fewer prior assumptions or input parameters. The inconvenience of system disruption (e.g. due to component unavailability) may be addressed with the development of analytical tools that can be used to proactively monitor and mitigate risks associated with future obsolescence. We consider modeling obsolescence using machine learning algorithms, leveraging the application-methods pairing highlighted by Jennings, Wu, and Terpenny in 2016. We discuss the selection and evaluation of machine learning techniques for applications in obsolescence and outline characteristics of candidate datasets that may provide insight into modeling and predicting obsolescence. (Received September 22, 2017)