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Stochastic modelling on epidemics and how they affect the workplace

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Abstract

In this thesis, we look at how diseases affect the workplace. We are mainly interested in the productivity of the workplace during the epidemic. We create a stochastic model which has a closed population and a two-level contact structure. Through simulation, we are able to analyze how the different parameters affect the productivity of the workplace. We derive the so-called basic reproduction number R_0 and discuss how it relates to the size and duration of the epidemic.

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