

# Nathaniel Skelton

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## Small-Scale Wind Power Prediction

This study is focused on the development of viable power generation modeling for small scale wind power installations. Armed with a viable model, businesses and individuals would have another option to reliably power small-scale buildings or installations. This study defines small-scale wind power turbines as those installed on buildings, or otherwise operating under 30 meters (~100 feet). Both of these installation environments provide inconsistent wind speeds, among other properties, that most wind power models do not address. Through the development of a sample wind turbine and accompanying weather station, multiple methods of prediction have been implemented with varying degrees of success.

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*Nathan Skelton is a senior studying Computer Science at the Missouri University of Science and Technology, and is expected to get his B.S. in May 2021. Along with his undergraduate research, he is the current CEO of the Missouri S&T Mars Rover Design Team.*