Breaking wave loads on OWT support structures

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The project I am working on focuses on modeling breaking wave (BW) loads on offshore wind turbines (OWT) support structures. The purpose of modeling BW loads is to understand what kinds of impacts they can impose on OWT support structures, and improve upon previously-used modeling equations based on a simulation Computational Fluid Dynamics (CFD) frame work. This will help design OWT supporting structures by taking into consideration loads from BW that we find in our model. My personal contributions to the project are to create python script files for all Ensight postprocessing done by my mentor and recreate CAD geometry files of OWT jacket substructures using Autodesk Inventor. Scripting the post-processing allows us to easily modify the parameters of our postprocessing and run the same postprocessing multiple times. The jacket substructures geometries will be used by my mentor in future CFD simulations of waves impacting jackets. The end goal is to understand what kind of impacts breaking wave loads can impose on OWT supporting structures.