This project aims to model wind turbine operation using CFD.

Objectives:
- to implement in Fluent a 3D model for turbine blades rotation.
- to evaluate the lift and drag coefficients of the model and validate.
- to study the wake behind the turbine compared with rotational velocity.
- to visualize the pressure distribution on the wind turbine.

The focus of this model was on Three-Blade Horizontal Axis Wind Turbine (HAWT) (As seen to the right). The Three-Bladed HAWT is the most common wind turbine because of its combination of efficiency and dynamic stability.