[1] determines that the average wind speed monitored via an anemometer is , where is the number of pulses over a period detected from the anemometer by the microcontroller, and is “the radius from the pivot to the edge of a cup” [1], [2]. However, a real anemometer always contain a parameter called the anemometer factor as demostrated by [3]. However, since the determination of the anemometer factor requires a deep study on the aerodynamic characteristics of the cup anemometer itself, this thesis shall only take the basic field test results of the sensor for designing the software related to this wind speed sensor.

The software design for the anemometer remains from the conceptual design [1].

The anemometer-reading method

[1] H. N. Do, “Conceptual Design of an Autonomous Wireless Agrometeorology Station,” 2023.

[2] Raspberry Pi Foundation, “Build your own weather station.” https://projects.raspberrypi.org/en/projects/build-your-own-weather-station/0.

[3] S. Pindado, J. Cubas, and F. Sorribes-Palmer, “The Cup Anemometer, a Fundamental Meteorological Instrument for the Wind Energy Industry. Research at the IDR/UPM Institute,” *Sensors*, vol. 14, no. 11, pp. 21418–21452, Nov. 2014, doi: 10.3390/s141121418.