Wind Speed / Direction
Cup Anemometer and Wind Vane

The Design
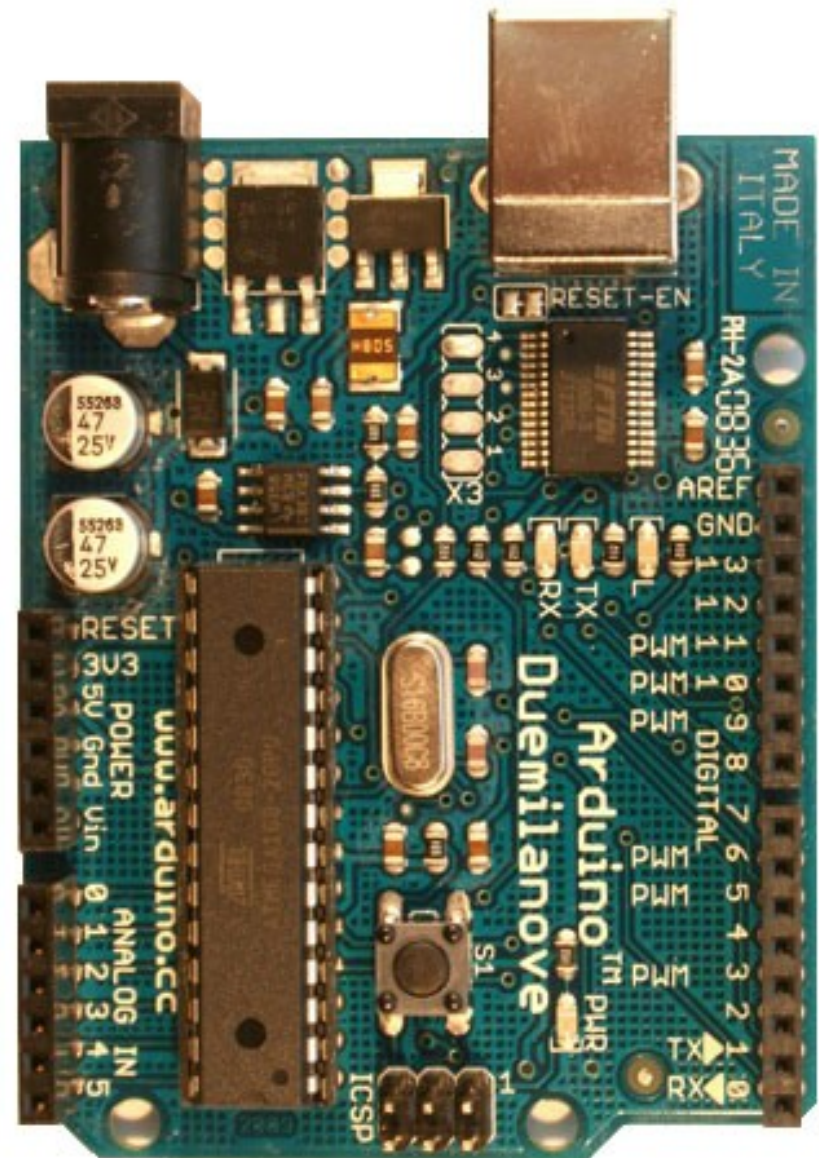
Control Box

& Wind Vane

Cup Anemometer

Engineering Hurdles

- ~140 ft from computer

- USB has a max length of 15 m

- Wires have a hard time turning around 360° repeatedly
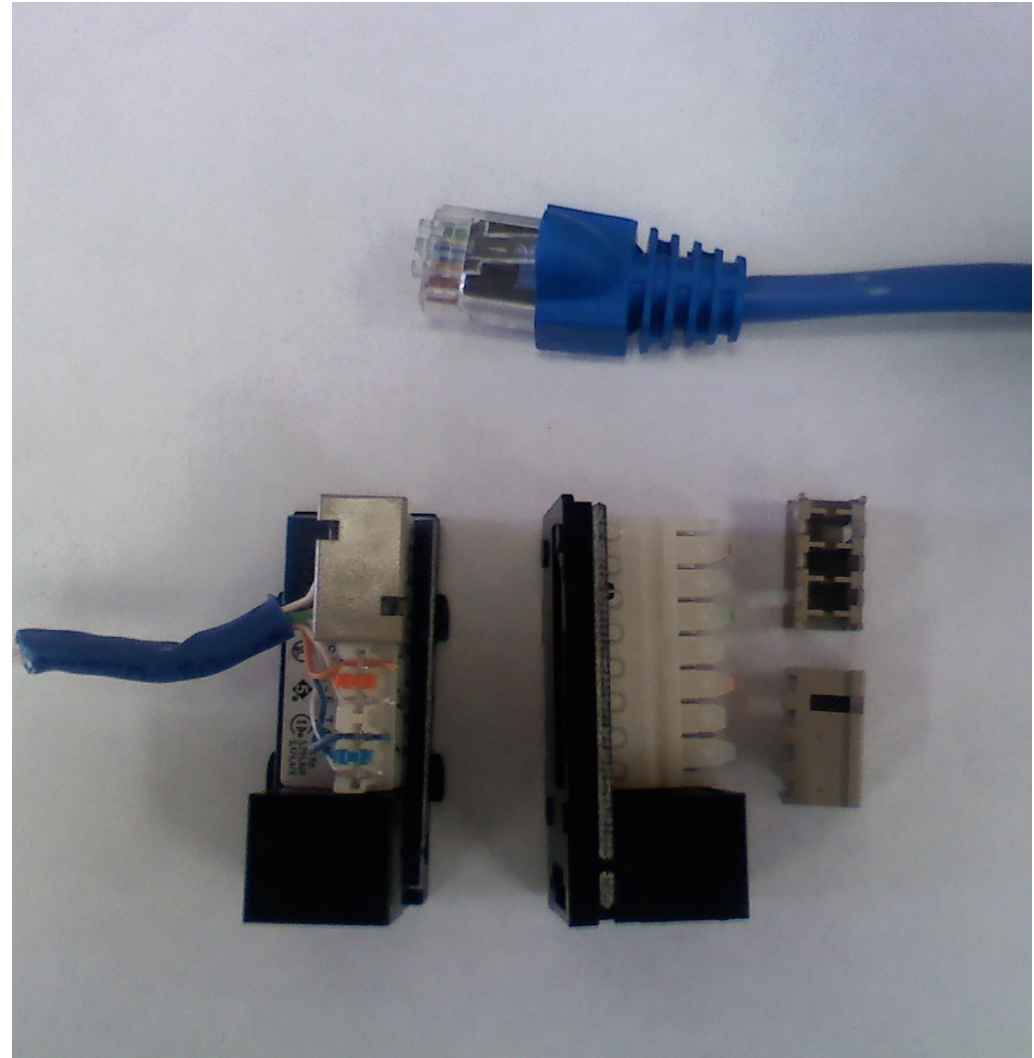
- Things spin best when balanced

- Budget of $0

What the Design Features

- Relative wind speed and absolute wind direction output at 10Hz

- Data collection and logging on a remote computer using Labview

- Arduino

Connections

- Most time consuming part of the project

- Used Cat5 cable and RJ-45 jacks

  - Both are cheap and available

What I Have Learned

- Basic C programming

- The basics of electronic communication

- Instrument design