

Intro to Physical Computing

Jeff Feddersen, ITP/NYU

(required class)

Purpose

Support/Expand/Enable creative expression...

...with technology...

...focused on physical, embodied interaction.

Method

“...with technology”



Programming Microcontrollers and Circuits

to be Cool*

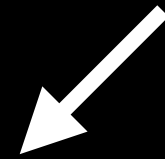
“Enable creative expression...”



“...focused on physical, embodied interaction.”

Circuits

Programming Microcontrollers and **Circuits** to be Cool*



- Electrical properties (voltage, resistance)
- Basic components and simple circuits
- Breadboard prototyping
- Testing and measuring
- Handling higher power

Microcontrollers

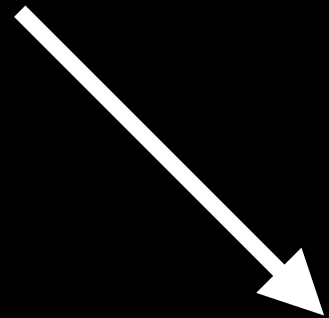
Programming **Microcontrollers** and Circuits to be Cool*



- Small cheap single-task computers
- Can sense and output voltages
- Fast (compared to us)

Programming

Programming Microcontrollers and Circuits to be Cool*



- Simple Development Tools
- Programming basics
 - Pseudocode
 - Variables, memory
 - Structure, control flow

to be Cool*

Programming Microcontrollers and Circuits **to be Cool***

to be Cool*

Programming Microcontrollers and Circuits **to be Cool***

*Up to you







Light

Sound

Motion

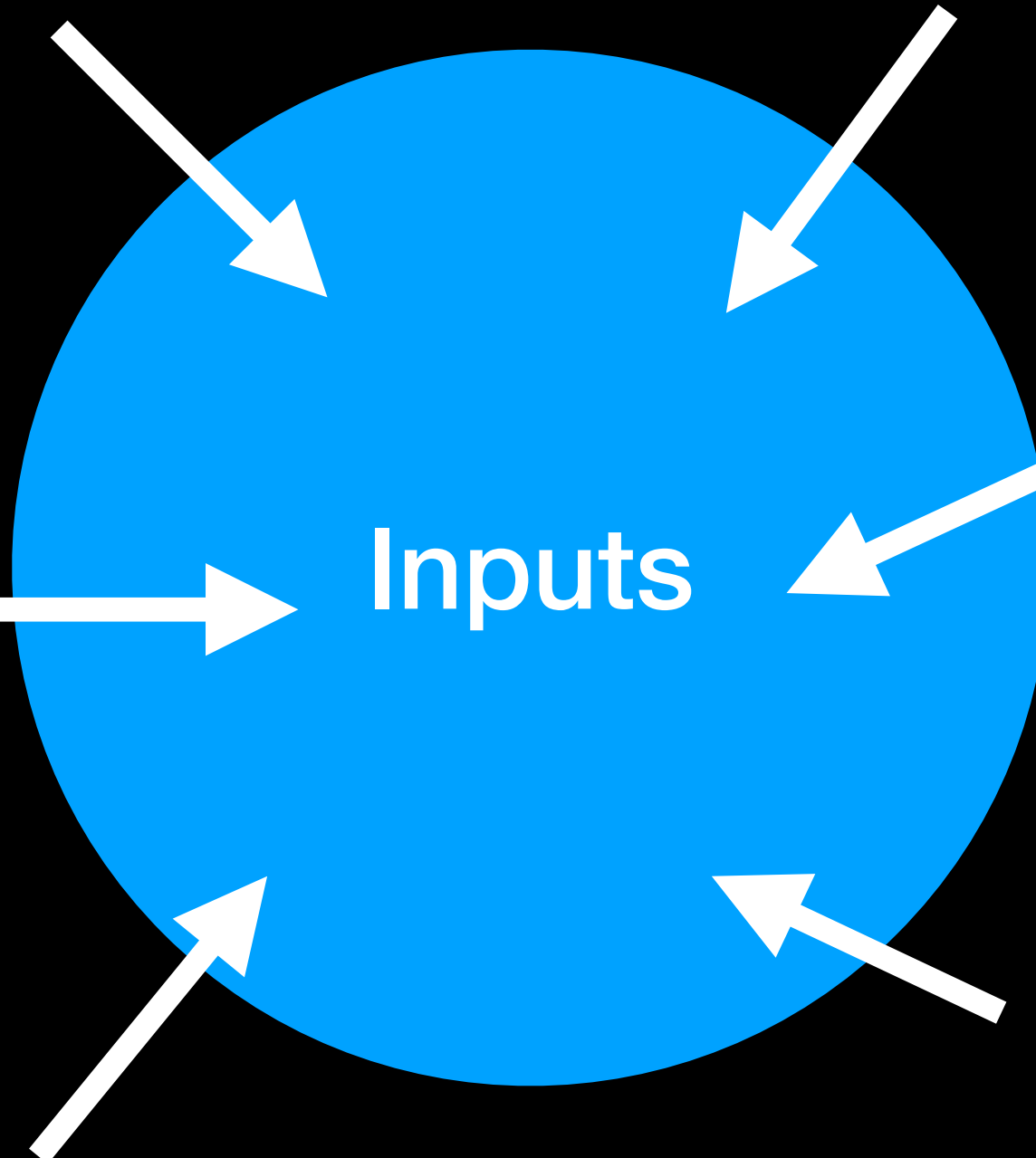
Smell

etc...

Temperature

Pressure

Inputs





Processing

Light

Sound

Motion

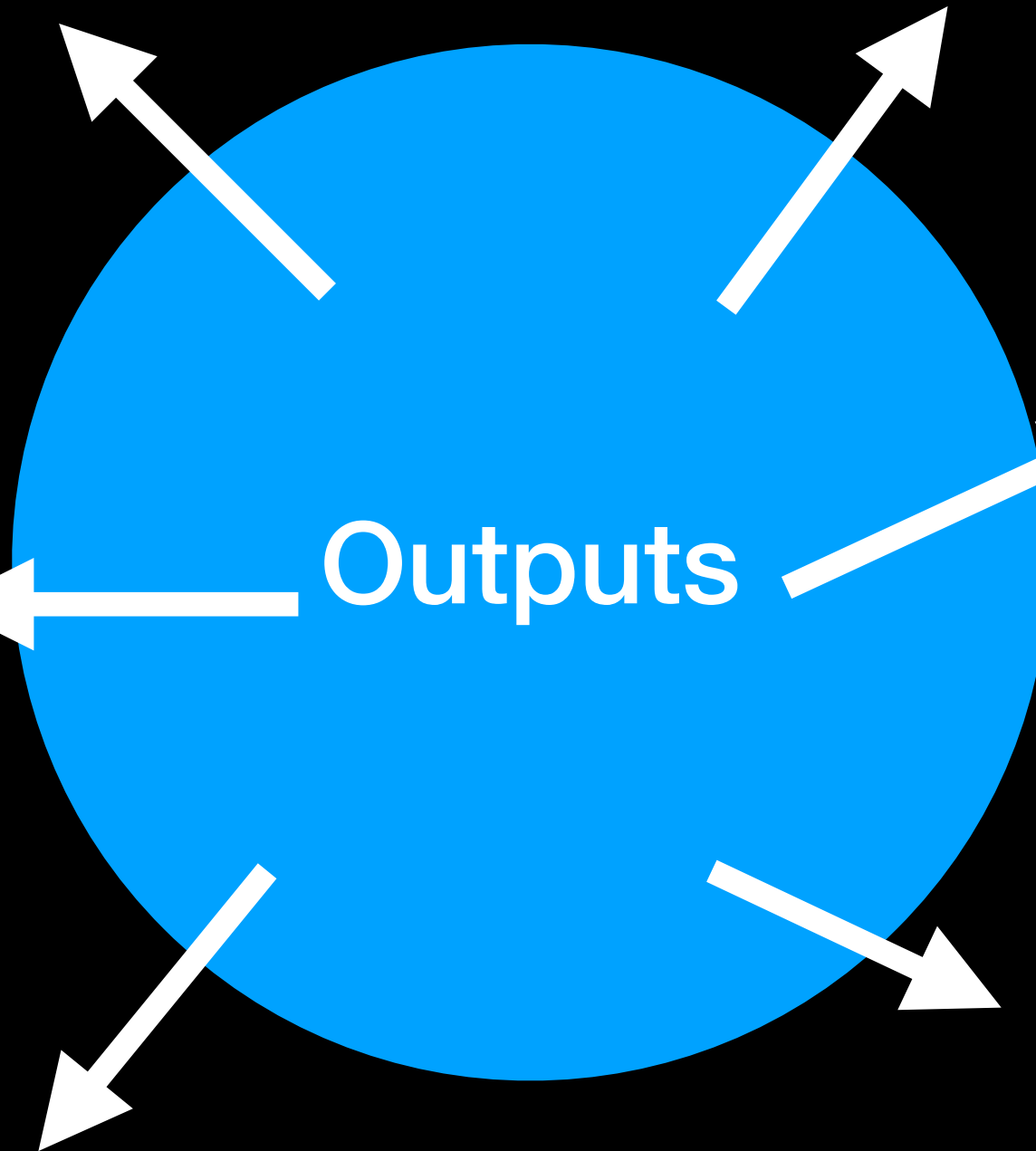
Smell

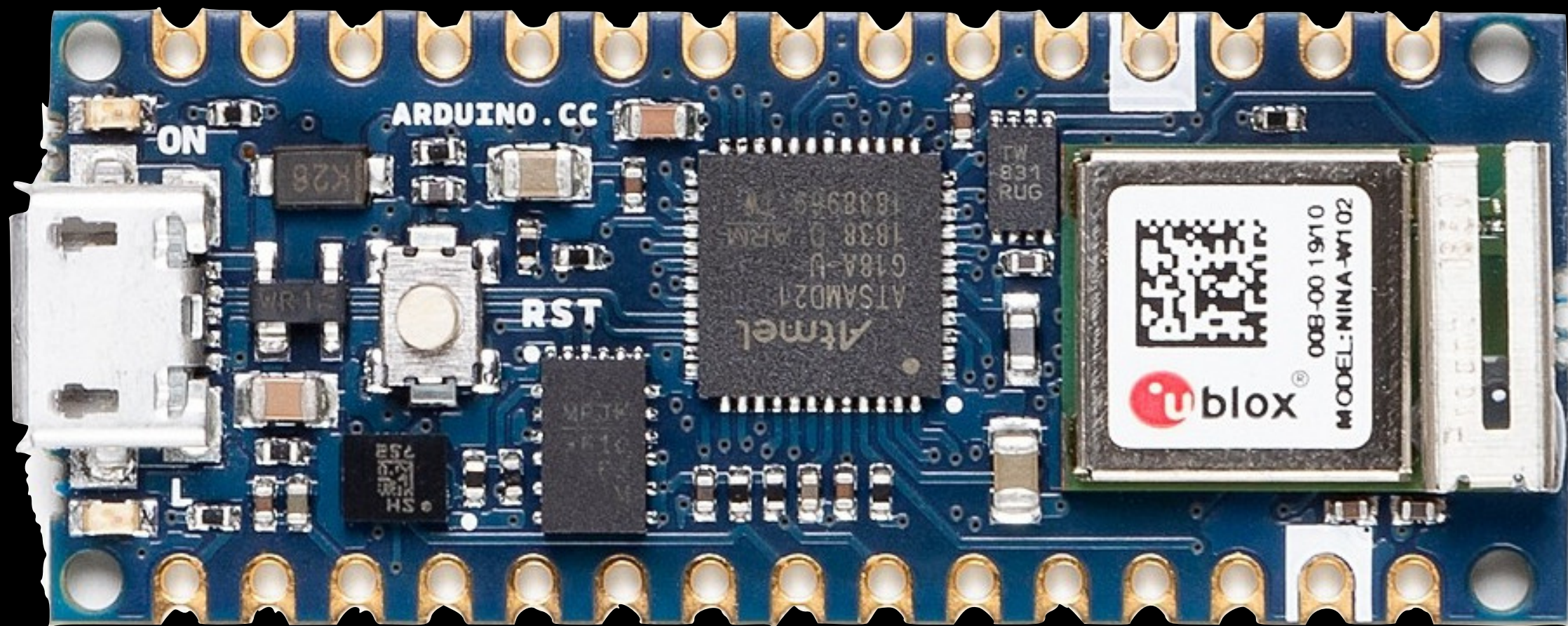
etc...

Temperature

Pressure

Outputs





Light

Sound

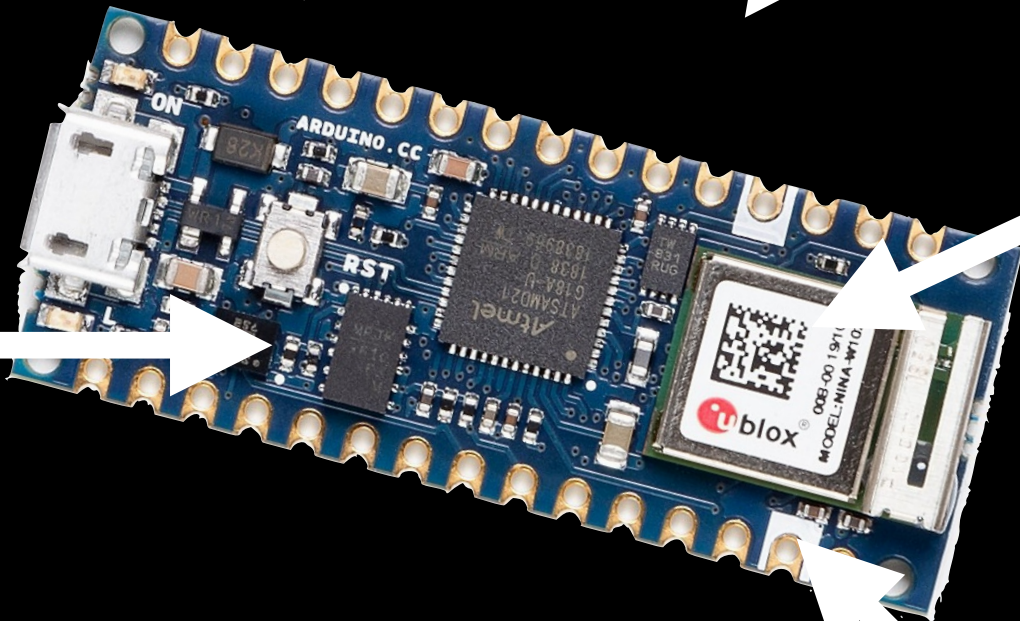
Motion

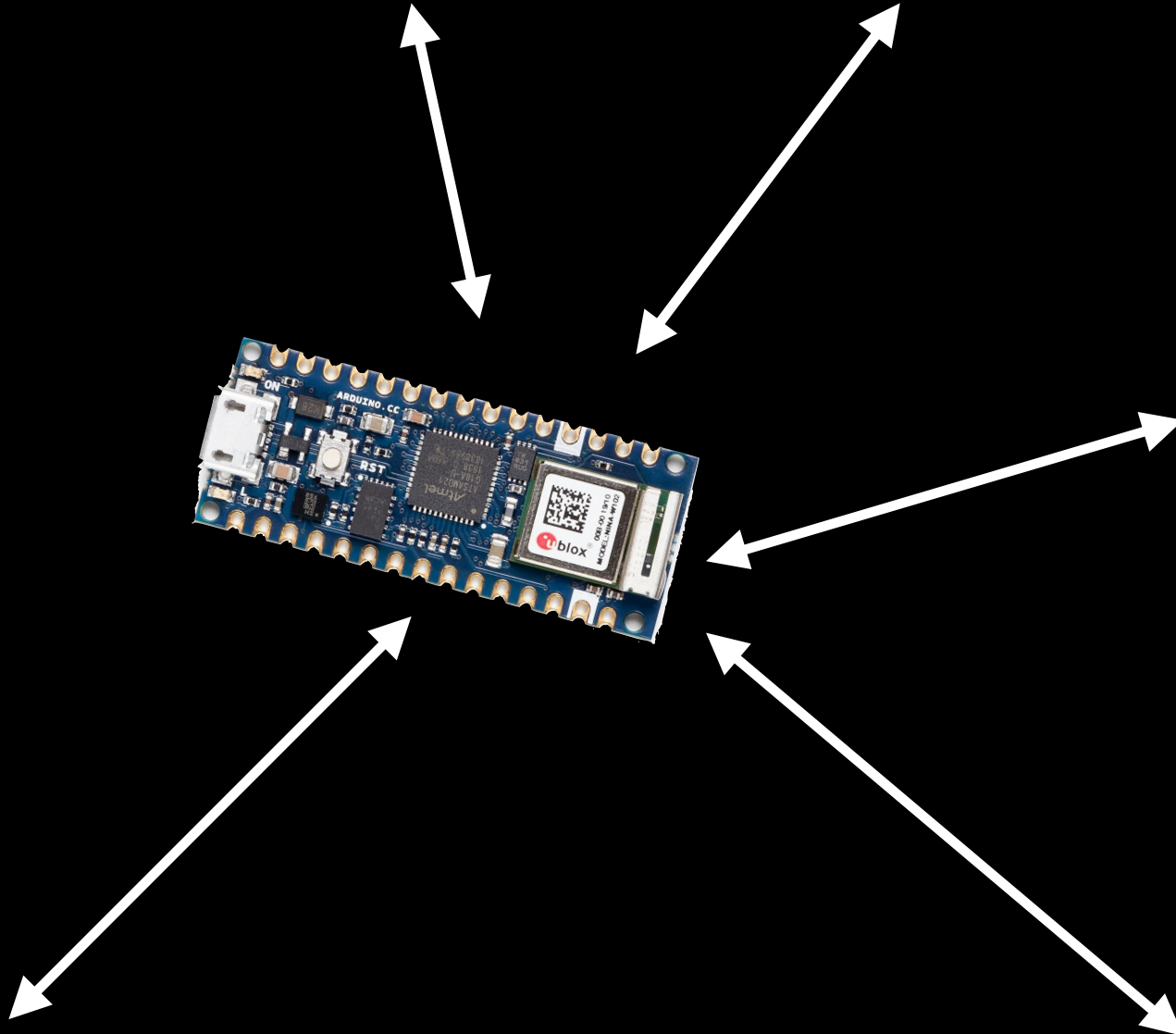
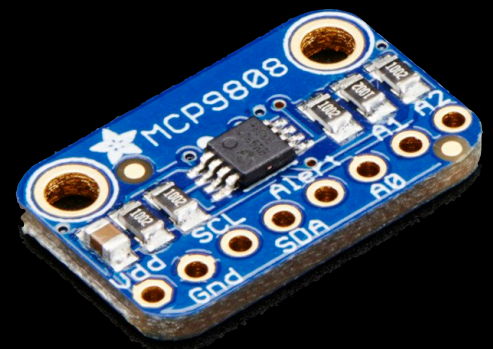
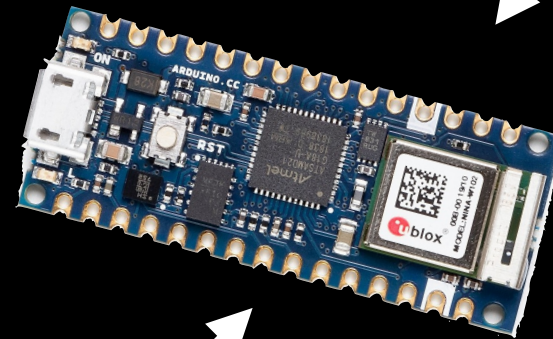
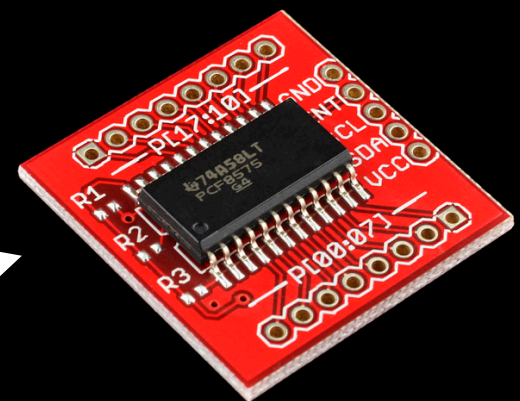
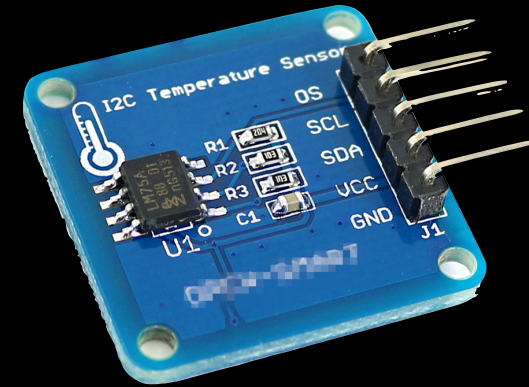
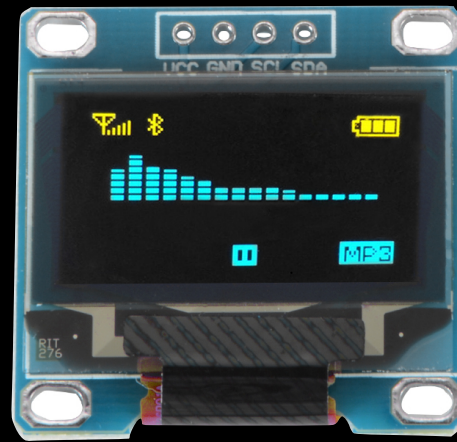
Smell

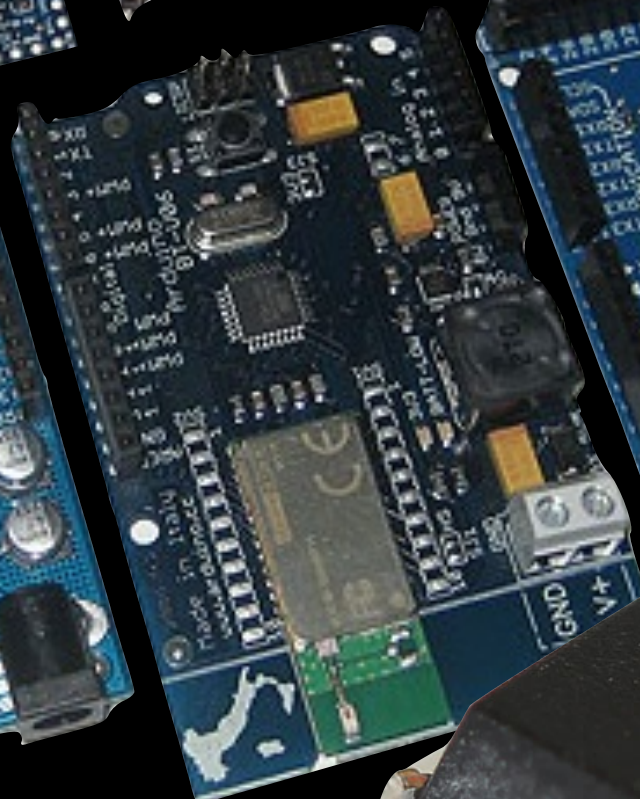
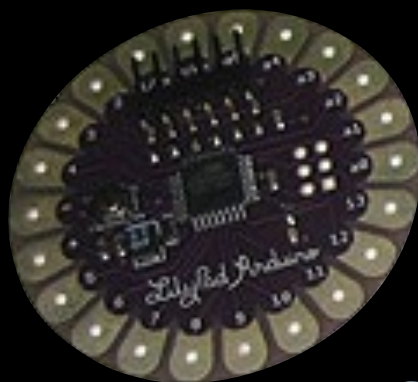
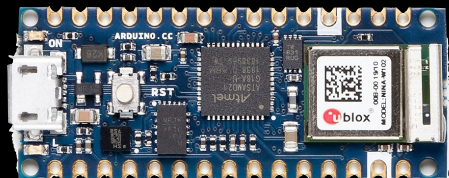
etc...

Temperature

Pressure







- Methods for handling larger projects
- Fabrication
- Play testing and User Testing
- Presenting and documenting

