Introduction:

At Humboldt State University we, as computer science students, are given many opportunities to collaborate with other departments and apply our knowledge of software and hardware technology to their fields. We have spent the last 36 hours developing the self-contained image analysis (SCIA) Project and building this website to allow researchers and hobbyists the opportunity to build their own SCIA Project.

The SCIA Project has been designed to be an all-in-one trail camera that is able to take images at a set interval. These images will then automatically have object recognition performed on them (via the Wolfram Alpha Programming Language: Mathematica) and then the images, and their data, will stream wirelessly to the user’s database. The information from the user’s database will then populate a website with information such as: GPS coordinates, timestamps and the amount of wildlife in their images.

List of Required Materials: (\*We suggest this kit: [CanaKit Raspberry Pi 2 Complete Starter Kit](http://www.amazon.com/CanaKit-Raspberry-Complete-Original-Preloaded/dp/B008XVAVAW/ref=sr_1_1?s=electronics&ie=UTF8&qid=1425800995&sr=1-1&keywords=CanaKit+Raspberry+Pi+2+Complete+Starter+Kit+with+WiFi))

* 2 Raspberry Pi 2 Devices (Quad-Core 900MHz 1GB RAM)\*
* 1 CanaKit WiFi Adapter\*
* [Raspberry PI 5MP Camera Board Module](http://www.amazon.com/gp/product/B00E1GGE40/ref=pe_385040_128020140_pd_te_s_bx_ti/176-6575756-5150256)
* 4000 mAh Power Bank (input: 5V/2.1A Max. and output:5V/2.1A Max.)
* 2 64 GB MicroSD cards
* A small CAT6 crossover cable
* A 5”x8”x3” Project Box
* USB Component Mouse/Keyboard
* Monitor
* HDMI Cable\*