

# Identifying Academic Drone Research And Drone Manufacturing: Research Suggestions

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Suggestions are provided for researching drone research and drone manufacturing taking place in a given state or locale.

*(Note: “uav” and “uas,” mentioned below, stand for “unmanned aerial vehicle” and “unmanned aerial systems,” respectively.)*

## **(I) ACADEMIC DRONE RESEARCH**

The three main means for uncovering drone research in your area are Google searches, contracts listed on the FedSpending.org website, and information you get directly from students and others in the university community.

### **(A) Google**

The first cut at finding drone research in your area might be to Google:

research uav [name of state]

For instance, Googling:

research uav Pennsylvania

yields information on drone-related work going on at the University of Pennsylvania and at Penn State. The search also found that a firm in Warminster, PA, is doing work on “persistent surveillance” for drones for potential use in Afghanistan.

Another example of a format for a search:

research uav [name of school]

For example:

uav research Lehigh University

(Try also uas in lieu of uav.)

You can also Google:

DOD uav contracts [name of state]  
DOD uav contracts [name of school]

. . . and see what comes up. This will also render names of firms doing drone work in your area.

### **(B) FedSpending.org**

FedSpending.org gives information on federal contracts, including for drone research.

- > Go to the website FedSpending.org
- > Click on the “Contracts” tab.
- > Type in the name of the school (or firm) that you want to research.
- > This will give you a breakdown of contracts they are receiving or have received; you can sort through by fiscal year and location.

This will not give you a complete idea of what the contracts are for, but you will have enough to dig for more information (including going directly to the school and asking!).

Example: Searching under contracts for the University of Pennsylvania shows a breakdown in fiscal year 2011 indicating UPenn got contracts in that year of \$2.01 million from the Defense Advanced Research Projects Agency (DARPA) and the Navy, \$2.5 million. The site can search deeper into the nature of the contracts, but sometimes the language is quite obscure and needs direct follow-up.

### **(C) Talking with students**

In addition, it is very important to talk with students and others in the university community to find out if they have heard of any drone research that is going on. This may turn up information that is not easy to uncover using the search tools described above. (It has been our experience that some contracts exist that are not listed on the FedSpending website.)

## **(II) DRONE MANUFACTURING**

The techniques for locating drone manufacturers are similar to the Google search instructions above.

### **(A) Finding Aerospace Companies in Your Area**

A first step in finding firms working on drone technology or manufacturing in your area is to Google:

aerospace companies [name of state]

For example, Googling:

aerospace companies Iowa

yields a list of companies including Rockwell Collins, which makes a variety of gear used in drones. You can then Google the company website to see if the company does drone work. Even if the home page does not mention drones, type in uav in the search box, (and uas) and drone related-work may then appear.

### **(B) Detecting Drone Manufacturing in Your Area by Searching the “Technical Name” of a drone or drones.**

An important way of researching drone manufacturing activity is through Googling “technical name” or government designation for a specific drone model or its components; for example MQ-9 Reaper. The Reaper is the workhorse of US drone attacks and assassination.

A rich source of such technical designations is the [Wikipedia article](#) on a given drone model. See, for instance, the article on the Reaper:

[http://en.wikipedia.org/wiki/General\\_Atomics\\_MQ-9\\_Reaper](http://en.wikipedia.org/wiki/General_Atomics_MQ-9_Reaper)

This yields information on the technical lingo corresponding to both the overall drone, and many of its components:

General Atomics MQ-9 Reaper

TP-331-10 turboprop motor – When you Google the motor number, you find it is made by Honeywell.

You can then Google Honeywell and the state and community in which you live.  
Googling

## Honeywell South Carolina

led to the information that Honeywell appears to be making drone motors and doing drone motor maintenance at its plant in Greer, South Carolina.

This report from the Congressional Research Service lists the most widely used drones in the US arsenal. This report is well-worth reading to make yourself familiar with drone types and other basic drone information.

<http://www.knowdrones.com/R42136.pdf>

This Wikipedia link possibly provides the most complete listing of all drones being used by the US, as well as other nations.

[http://en.wikipedia.org/wiki/List\\_of\\_unmanned\\_aerial\\_vehicles](http://en.wikipedia.org/wiki/List_of_unmanned_aerial_vehicles)

The list of drone bases in the US contained in the Department of Defense report linked below (pages 9-12) shows what types of drones are based where. Also a report worth reading.

<http://www.knowdrones.com/uas-future.pdf>

### **(C) Talking with People in the Community**

Once you find out which companies are in your area, you may be able to learn more about what they are making by asking people in your community.

These are a few suggestions to get started. Please send other suggestions that we can share to: [nickmottern@earthlink.net](mailto:nickmottern@earthlink.net) Also, please send any questions you may have.