Look Who's Talking Careers By Scott Brown

STEM Careers in Polar Climate

Grades 7-12

Single Class

Career Area & Job Title:

Electrical Engineering, *Analytics, Remote Sensing, Image Processing, *Computer Vision.

*See Big Picture for More Information.

The Big Picture - What I do:

My work focuses on different kinds of imaging collected from both infrared cameras that use the heat given off by an object to create thermal images, and visible wavelength video cameras. Both cameras collect images from 1200 meters (almost 4000 ft!) in the air from a plane moving at ~250 km/hr. I maintain and operate the cameras and aid in purchasing the imaging-related equipment.

Collecting the data is just the beginning of my job! Once we have the images the post-processing begins with Computer Vision and analytics. Computer Vision uses the light reflected back to our eyes from objects to develop algorithms that provide meaning to what we are seeing. This allows us to tell how far away objects are and how they are orientated. I also use analytics (or the discovery of meaningful patterns in the data) to help provide meaning to what we are seeing. The data collected is meaningless without this post processing to generate analysis plots and products. These products are also used for journal publications.

What I Like Most About My Job:

I like problem solving practical issues, travelling, working with electronics and the research-grade equipment.

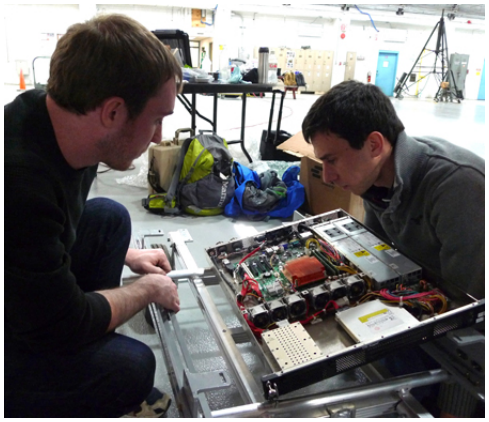
The Most Unusual Part About My Job:

Travelling to exotic places, such as Diego Garcia – it is an island, NOT a person - (you might need to google it), Greenland, Alaska & the Arctic circle.

What Type of Schooling/Experience is Needed?

Electrical engineering or related degree, usually masters level. My two degrees are bachelors physics and bachelors electrical engineering.

Photo



Scott Brown (l) 'troubleshoots' equipment with Chris Bertinato (r) while on-site at Stratton Air Force Base, Scotia, New York.

Education

Degree in Electrical Engineering

Degree in Physics

Columbia University