
Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values
Posted by [Paul Van Delst\[1\]](#) on Thu, 19 Jul 2012 18:41:58 GMT
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On 07/19/12 14:18, Narnia wrote:

> I'm using the eMODIS 10-day product from the USGS with this description: "MODIS NDVI data are stretched (mapped)
> linearly (to byte values) as follows: [-1.0, 1.0] -> [0, 200] Invalid Values: 201 - 255
>
> NDVI = (value - 100) / 100; example: [(150 - 100) / 100 = 0.5 NDVI]"
>
> I am trying thus to scale the data in ENVI just using Band Math [expression:((b1-100)/100)] and all the values I get
> are 0 across my entire image. Any thoughts as to why?

```
IDL> value = 150
IDL> help, (value - 100) / 100
<Expression>  LONG      =      0
```

```
IDL> value = 150.0
IDL> help, (value - 100) / 100
<Expression>  FLOAT     =    0.500000
```

>
> Secondly, I need to do this for over 400 images; can someone suggest a quick script that can read and scale this data
> in IDL? I tried 'ScaledImage' but i keep getting errors as well...

I would write one myself. Mostly since the scaling is just a one-line operation. At least you know you're getting the correct (or wrong) answer that way. :o)

cheers,

paulv

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values
Posted by [Narnia](#) on Thu, 19 Jul 2012 19:19:47 GMT
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Thanks a lot, Paul, that makes sense of course but (I'm a real beginner with IDL), I'm still not sure how I would implement that as far as calling in the images and declaring that to run and scale all the images in my folder! :(

On Thursday, July 19, 2012 9:18:39 PM UTC+3, Narnia wrote:

> I'm using the eMODIS 10-day product from the USGS with this description: "MODIS NDVI data are stretched (mapped) linearly (to byte values) as follows:
> [-1.0, 1.0] -> [0, 200]
> Invalid Values: 201 - 255
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> $NDVI = (value - 100) / 100$; example: $[(150 - 100) / 100 = 0.5 NDVI]$
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>
> Secondly, I need to do this for over 400 images; can someone suggest a quick script that can read and scale this data in IDL? I tried 'ScaledImage' but i keep getting errors as well...
>
> Thank you so much!

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values
Posted by [Paul Van Delst\[1\]](#) on Thu, 19 Jul 2012 20:13:32 GMT
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Hello,

On 07/19/12 15:19, Narnia wrote:

> Thanks a lot, Paul, that makes sense of course but (I'm a real beginner with IDL), I'm still not sure how I would
> implement that as far as calling in the images and declaring that to run and scale all the images in my folder! :(

Well, let's assume you already have a function that reads the image data (I can't help with that one). Let's call it "read_image" and assume it looks something like:

```
FUNCTION Read_Image, Filename
  ...open file...
  ...read image data...
  RETURN, image_data
END
```

Your scaling function could look like

```
FUNCTION Scale_Image, Input_Image
  output_image = FLOAT(Input_Image)
  output_image = (output_image - 100.0) / 100.0
  RETURN, output_image
END
```

Then you can loop over your filenames on the command line

```
IDL> files = FILE_SEARCH("path/to/data/emodis.filename.*")
IDL> FOR n = 0, N_ELEMENTS(files) DO BEGIN & scaled_image =
Scale_Image(Read_Image(files[n])) & ...display... & ENDFOR
```

?

cheers,

paulv

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values

Posted by [Narnia](#) on Fri, 20 Jul 2012 13:03:31 GMT

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You're my hero, thank you so much! It's perfect.

On Thursday, July 19, 2012 9:18:39 PM UTC+3, Narnia wrote:

> I'm using the eMODIS 10-day product from the USGS with this description: "MODIS
NDVI data are stretched (mapped) linearly (to byte values) as follows:
> [-1.0, 1.0] -> [0, 200]
> Invalid Values: 201 - 255
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> NDVI = (value - 100) / 100; example: [(150 - 100) / 100 = 0.5 NDVI]"
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> I am trying thus to scale the data in ENVI just using Band Math [expression:((b1-100)/100)] and
all the values I get are 0 across my entire image. Any thoughts as to why?
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read and scale this data in IDL? I tried 'ScaledImage'; but i keep getting errors as well...
>
> Thank you so much!

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values

Posted by [David Fanning](#) on Fri, 20 Jul 2012 13:07:51 GMT

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Narnia writes:

> You're my hero, thank you so much! It's perfect.

Geez, I might start answering questions again!

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values

Posted by [Narnia](#) on Fri, 20 Jul 2012 14:01:15 GMT

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Well, Dr. Coyote, you're the untouchable hero, I've drooling over your website quite a bit :P

On Friday, July 20, 2012 4:07:51 PM UTC+3, David Fanning wrote:

> Narnia writes:

>

> > You're my hero, thank you so much! It's perfect.

>

> Geez, I might start answering questions again!

>

> Cheers,

>

> David

>

>

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values

Posted by [Narnia](#) on Fri, 20 Jul 2012 14:05:55 GMT

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That would be a good idea, Dr. Coyote; I've been 'drooling' over your website quite a bit :)

On Friday, July 20, 2012 4:07:51 PM UTC+3, David Fanning wrote:

> Narnia writes:

>

> > You're my hero, thank you so much! It's perfect.

>

> Geez, I might start answering questions again!

>
> Cheers,
>
> David
>
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
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Subject: Re: Rescaling byte (0-200) ndvi to -1 to 1 values
Posted by [k.shemsu](#) on Mon, 20 May 2013 12:39:46 GMT
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On Thursday, July 19, 2012 11:13:32 PM UTC+3, Paul van Delst wrote:

> Hello,
>
>
>
> On 07/19/12 15:19, Narnia wrote:
>
>> Thanks a lot, Paul, that makes sense of course but (I'm a real beginner with IDL), I'm still not
sure how I would
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images in my folder! :(
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>
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> Well, let's assume you already have a function that reads the image data (I can't help with that
one). Let's call it
>
> "read_image" and assume it looks something like:
>
>
>
> FUNCTION Read_Image, Filename
>
> ...open file...
>
> ...read image data...
>
> RETURN, image_data
>
> END

```
>
>
>
> Your scaling function could look like
>
>
>
> FUNCTION Scale_Image, Input_Image
>
>   output_image = FLOAT(Input_Image)
>
>   output_image = (output_image - 100.0) / 100.0
>
>   RETURN, output_image
>
> END
>
>
>
> Then you can loop over your filenames on the command line
>
>
>
> IDL> files = FILE_SEARCH("path/to/data/emodis.filename.*")
>
> IDL> FOR n = 0, N_ELEMENTS(files) DO BEGIN & scaled_image =
Scale_Image(Read_Image(files[n])) & ...display... & ENDFOR
>
>
>
> ?
>
>
>
> cheers,
>
>
>
> paulv
```

Hi Paul,

I have seen your suggestion, but I don't work in IDL. Can you tell me this process in ArcGIS?
Thank you in advance for your kind support. KS
