Case Study: Sunset Model

Date: 11/17/15, Valid at 23z

Creators: Jacob DeFlitch, Ben Reppert, Steve Hallett
Verified Locations

Regions where the resulting sunset was “Vivid” as outputted by our model in the yellow, orange, and red colors.
Montpelier, VT – Ed Coleman
New York City, NY – Garkhan
Put-In-Bay, OH - Lance Woodworth
Chapel Hill, NC – UNC Young Alumni
Cleveland, TN – Daniel Alvarez
Wilmington, NC – Kaisho Studios
Chipley, FL – Cheryl Gainer McCall
Calera, AL – Ryon Smith
Oxford, MS – Bill Partridge
Austin, TX – Grace Evelynn
Clifty, AR – Cherie Clark
Gore, OK – Pam Wemhaner
Des Moines, IA – Aarron Weets
Crystal Springs, ND – Ellen Schafer
Billings, MT – mpetty
Woodland, CA – Steve Beckley
Visalia, CA – Keri Anderson
Scottsdale, AZ – I Love Scottsdale
Las Vegas, NV – Carolyn Ronning
LOCATIONS FOR IMPROVEMENT

Regions where the resulting sunset was forecasted to be “Vivid” by our model and ended up “Poor.” And regions where the resulting sunset was forecasted to be “Poor” by our model and ended up “Vivid.”
@WxDeFlitch pretty weak. No color.

4:14 AM - 18 Nov 2015

Hickory, NC – Steven Lesley
SUMMARY

Looking at the overall verification of the inaugural running of the sunset model, in general we think it worked out well. Remembering that we are defining a great sunset as one with adequate clouds to reflect red/orange color, the above examples show that in most areas where a vivid sunset was projected, we had ground truth of it. One major exception was the western parts of the Carolinas, as well as portions of Virginia and Kentucky. It is our immediate thought that the issue may be overcast sky cover thanks to high clouds, a complication that needs to be dealt with in our algorithm. Another area in need of improvement is Florida; despite our model outputting a “Poor” sunset for portions of southern Florida, the result turned out to be fairly vivid.

Something that we are particularly proud of is the model’s ability to recognize the post-frontal areas across the plains and Midwest, where adequate low level drying, along with high clouds was expected to allow for a nice sunset in the thin corridor from the central Dakotas, down to western Louisiana.

Although there are areas for improvement in the future, for the model’s inaugural run, we are pleased with the results.
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Steve Hallett (@hallettwx)