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The Dating Game – with Google Maps and Vector Algebra

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— By measuring the shadow in a photograph of a known object at a known location you can determine the date at which the photo was taken. Photos from Google Maps or Google Earth come with latitude and longitude to six decimal places, enough precision to find the location and scale size of objects in the picture. The transformation of the quantities measured on the photograph into celestial coordinates is a nice exercise in 3-D visualization and the use of vector algebra. We show an example of the use of vectors to extract geometric information from a Google Map photo and then use the results to find the date on which it was taken.

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