Combining satellite imagery and machine learning to predict poverty

Neal Jean[1,2,*], **Marshall Burke**[3,4,5,*,†], **Michael Xie**[1], **W. Matthew Davis**[4], **David B. Lobell**[3,4], **Stefano Ermon**[1]

+ See all authors and affiliations

Measuring consumption and wealth remotely

Nighttime lighting is a rough proxy for economic wealth, and nighttime maps of the world show that many developing countries are sparsely illuminated. Jean *et al.* combined nighttime maps with high-resolution daytime satellite images (see the Perspective by Blumenstock). With a bit of machine-learning wizardry, the combined images can be converted into accurate estimates of household consumption and assets, both of which are hard to measure in poorer countries. Furthermore, the night- and day-time data are publicly available and nonproprietary.

Science, this issue p. ; see also p.