# AI images and astronomy

Telescopes produce huge amounts of data, including images of the futhrthest part of space

Astonomers use these to search for exoplanets – planets orbiting around stars in other solar systems

Images of space have a huge number of possible exoplanets. AI can identify possibilities much quicker than humans so they can be examined

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But new tools are helping the search. The ability of artificial intelligence (AI) to both handle massive datasets - and to spot anomalies - is transforming the hunt for alien intelligence.

When operational, the AI will be able to process every bit of data captured - two terabytes (TB) every second. To put that into context, modern laptops now typically have around 1TB of total storage.

BBC article February 2024

One area of astronomy where AI has made a significant impact is in the search for exoplanets. There are many ways to look for their signals, but the most productive methods with current technology usually involve studying the variation of a star's brightness over time. If a star's light curve shows a characteristic dimming, it could be a sure sign of a planet transiting in front of the host star. Conversely, a phenomenon called gravitational microlensing can cause a large spike in a star's brightness, when the exoplanet's gravity acts as a lens and magnifies a more distant star along the line of sight. Detecting these dips and spikes means sifting through millions of light curves, studiously collected by space telescopes like NASA's Kepler and TESS (Transiting Exoplanet Survey Satellite).

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Kew Gardens in London is using AI to predict extinction risk for plant species