

Global Innovation



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In this new series, 'AI - tried & tested by the Global Innovation team', the fund managers focus on the key industries and products where AI is democratising technologies and capabilities, opening up new markets and growth opportunities for companies adopting these. In this first article, fund manager James O'Connor tests Adobe's generative AI model, Firefly.

Firefly – a small step for AI, a giant leap for Global Innovation

AI has captured the spotlight over the past year, transitioning from a niche technological field to a term so prominent it was named Collin's Dictionary's word of the year for 2023. This increased attention isn't just hype; [as we have written about before](#), AI is already delivering tangible value. Not only is AI improving productivity by enabling people to accomplish more with less, but it is also helping open up new markets and stimulating growth. Key to this growth is the concept of democratisation: by utilising AI-powered technologies, people are being empowered to engage in activities that were previously out of reach, ranging from coding and app development to writing and creative design. In order to test this idea out, members of the Global Innovation team have rolled up our sleeves to experiment with various AI applications in a hands-on way.

Starting things off with creative image design, I opted to experiment with *Firefly*, an exciting new generative AI model released earlier this year by one of our current portfolio holdings, Adobe. This model can recognise connections between text and images to generate image outputs, and now powers an array of tools across Adobe's creative software suite. Leveraging Adobe's vast scale and IP, the latest version - *Firefly 2* - was trained on over 500 million images and videos from Adobe's stock catalogue and the public domain ([source](#)), meaning all images are safe for commercial use with no IP infringement concerns. With that peace of mind, I used Adobe's online Photoshop application to embark on a creative mission: send the Global Innovation team to outer space.

Step 1: Getting our heads sorted / Auto-select. I started by uploading team photos and using Firefly's 'select object' feature to isolate our heads from things like backgrounds and neck-ties – a task completed with surprising ease. Voila, four floating heads, in just four minutes.

Step 2: Becoming astronauts / Generative fill. The bulk of the image utilised Firefly's text-to-image generative fill feature. This simply required selecting an area around each head and typing a text prompt ("astronaut space suit"), from which the AI generated three original space-suit options. Same process for the background layer ("space station interior"), and ten minutes later – after careful selection – we had four astronauts in a space station.

Step 3: Creating some space / Auto fill: At this stage things were a bit crowded. No problem – I just extended the canvas and used the AI 'auto fill' feature, which generatively expanded the background by iterating on what was already there. Bigger room, plenty of space.

Step 4: Finding equilibrium / Auto colour. The original headshot photos did not quite match the colouring of the new space station, so I used the AI 'auto colour' and 'glow subject' features. This balanced the colours, taking into account features like light-sources in the background, and helped the astronauts pop a little.

The final image is far from perfect, but a giant leap from what I could have achieved without Firefly's AI assistance.



What did I learn about Firefly through this hands-on experience? Firstly, the time savings are real: tasks that would have taken me hours – such as mastering various tools, sourcing and uploading content, assembling the final image, and colour correction – were accomplished in less than a lunch break thanks to Firefly's AI assistance. Secondly, it was easy to achieve quality: tools were not only intuitive and required minimal technical skill, but also produced high-quality images. The precision of AI tools like 'select object' ensured clean and accurate details (no jagged edges or missing ears), while the text-to-image generation simply required written prompts to create images that were fully contextually appropriate (heads fit in space suits, everything was on-theme). Lastly, these tools fostered creativity: Firefly's generative image capabilities allowed me to overcome creative blocks, offering the flexibility to either guide the AI with detailed prompts or explore new ideas with more open-ended suggestions. This blend of efficiency, simplicity, and creativity not only saved time but also made the creative process more accessible and enjoyable.

These elements, highlighted through my experience, help bring to life how Adobe's Firefly AI model can both boost productivity while also democratising the creative process. Its intuitive design, ease of use, and overall efficiency not only save time but also lower barriers to entry, making creative endeavours more accessible to a wider audience – myself included. This is a boon for consumers and a strategic win for Adobe: improved productivity leads to increased user engagement and retention. Meanwhile, democratising technology in this fashion expands Adobe's user base beyond professional designers, opening up new markets for growth. The tangible impact of Firefly is already evident: over three billion images have been generated since its beta launch in March, with a remarkable 90% of Firefly web app users being newcomers to Adobe products ([source](#)). This statistic not only highlights the customer value creation of these AI tools in general, but also underscores AI's role in driving a new wave of growth for companies such as Adobe years ahead.

For a comprehensive list of common financial words and terms, see our glossary at:
<https://www.liontrust.co.uk/benefits-of-investing/guide-financial-words-terms>

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