

Issue 221

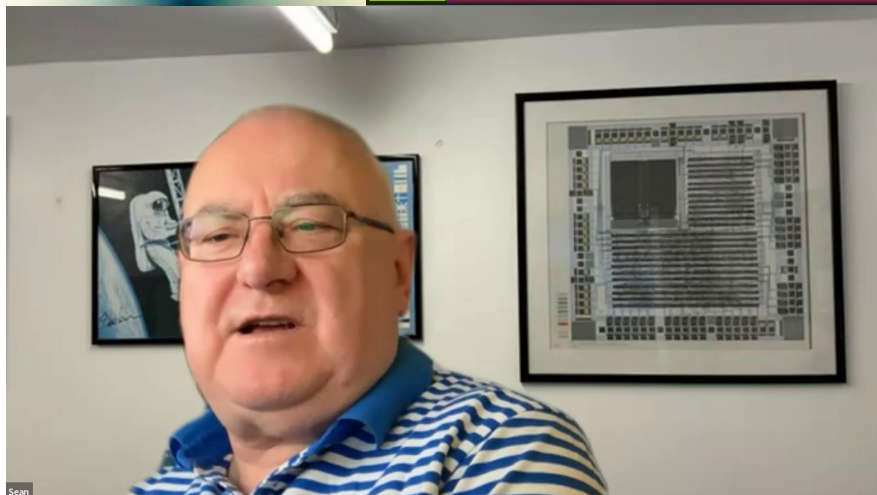
SPRING 2023

ISLE OF WIGHT PC USER  
GROUP



**HOT KEY**

April 2023

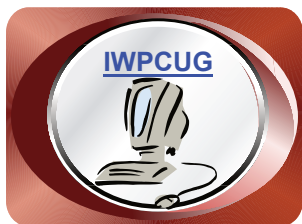


In January 2023 Sean Colson gave us a talk on the subject of "IT & International Conflict"

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# The Isle of Wight Personal Computer User Group

We welcome anyone who has an interest in computers and related technology and what you can do with them.

We are a group which seeks to exchange ideas and new information.

**Membership is £12 per annum**

Our meetings are normally held on the first Wednesday of each month from 7.00 to 9.00 pm. Until further notice these will be held online via Zoom.

*Visitors are always welcome.*

**If you would like to know more about us, you are most welcome to come along to one of our meetings, or you can contact one of our Committee Members listed on page 3.**

The Club web site address is [www.iwpcug.org](http://www.iwpcug.org)

We also have an e-group discussion area on

Groups.io: <https://groups.io/g/iwpcug>

Details of how to join are on page 4.



## FUTURE MEETINGS

<u>Date</u>	<u>Subject</u>	<u>Speaker</u>
5 April	Sven Walkabout Repairs	Sven Alleblas
3 May	Spreadsheets	Jonathan Burt
7 June	TBC	
5 July	TBC	
9 August	Summer BBQ	

## ISLE OF WIGHT PC USER GROUP COMMITTEE

**Chairman :** David Groom

**Secretary :** position unfilled

**Treasurer :** Mike Hoar

**Membership and Database Secretary :** Roger Skidmore

**Committee Member:** Sven Alleblas

**Committee Member :** Susanne Bone

**Committee Member :** Steve Sutters

**Treasury Supervisor :** Phil Rogers

**Note:**

Contact details removed prior to publishing on the internet.

Suggestions for new events, topics or speakers for talks are always welcome.

Please contact Steve Sutters, or any committee member, with your ideas.  
If necessary we may be able to find a speaker for your subject.

## **Chairmans Report**

There will be a slight delay to you receiving HotKey, I didn't have many contributions for articles, and by the time I filled the magazine the Easter bank holidays were upon us.

Although the calendar on page 2 looks a little empty I am sure we will fill the two blank slots, so keep an eye on the web site and the E-group.

Since the last issue we have held the AGM. Reports were given on the various activities undertaken by the IWPCUG this year. Su Bone stepped down as Secretary, but will remain on the committee. Sven Alleblas was elected as a new committee member. Subscriptions for 2024 were set at £12, though it would be down to the committee to decide later this year whether or not we actually collect the subscriptions.

This issue has a number of articles on the subject of Artificial Intelligence. I touched on AI in October 2021 with an article on AI generated images of people. I believe that we will see much about the uses of AI during the coming year.

**David Groom**

### **Joining the Email Discussion Group**

Send an email to: [iwpcug+subscribe@groups.io](mailto:iwpcug+subscribe@groups.io), you will receive a confirmation email, follow the instructions in that email, and then wait for your approval request to be approved by one of the moderators.

All members are encouraged to join this group (it's free and private to club members) so you can keep in touch with events and join in with the discussions.

You can also keep in touch by regularly visiting [www.iwpcug.org](http://www.iwpcug.org)

## **Curious Uses of the Raspberry Pi**

Recently, I was on a call where it was said that the open source community is a combination of curiosity and a culture of solutions. And curiosity is the basis of our problem-solving. We use a lot of open source when solving problems of all sizes, and that includes Linux running on the supremely convenient Raspberry Pi.

We all have such different lived experiences, so I asked our community of writers about the most curious use of a Raspberry Pi they've ever encountered. I have a hunch that some of these fantastic builds will spark an idea for others.

### **Experimentation with the Raspberry Pi**

For me, the Raspberry Pi has been a great tool to add extra development resources on my home network. If I want to create a new website or experiment with a new software tool, I don't have to bog down my desktop Linux machine with a bunch of packages that I might only use once while experimenting. Instead, I set it up on my Raspberry Pi.

If I think I'm going to do something risky, I use a backup boot environment. I have two microSD cards, which allows me to have one plugged into the Raspberry Pi while I set up the second microSD to do whatever experimenting I want to do. The extra microSD doesn't cost that much, but it saves a ton of time for the times when I want to experiment on a second image. Just shutdown, swap microSD cards, reboot, and immediately I'm working on a dedicated test system.

When I'm not experimenting, my Raspberry Pi acts as a print server to put my non-WiFi printer on our home network. It is also a handy file server over SSH so that I can make quick backups of my important files. - **Jim Hall**

### **The popularity of the Raspberry Pi**

The most amazing thing I've seen about the Raspberry Pi is that it normalized and commoditized the idea of the small-board computers and made them genuinely and practically available to folks.

Before the Raspberry Pi, we had small-board computers in a similar fashion, but they tended to be niche, expensive, and nigh unapproachable from a software perspective. The Raspberry Pi was cheap, and cheap to the point of making it trivial for anyone to get one for a project (ignoring the current

round of unobtainium it's been going through). Once it was cheap, people worked around the software challenges and made it good enough to solve many basic computing tasks, down to being able to dedicate a full and real computer to a task, not just a microcontroller.

We've got a plethora of good, cheap-ish, small-board computers, and this gives way to tinkering, toying, and experimenting. People are willing to try new ideas, even spurring more hobbyist hardware development to support these ideas.

Honestly, that is by far the most amazing and radical thing I've seen from the Raspberry Pi: how it's fundamentally changed everyone's perception of what computing, at the level of what the Raspberry Pi excels at anyway, is and given rise not only to its own ecosystem but now countless others in diversity.- **John 'Warthog9' Hawley**

### **Raspberry Pi for the bees**

In 2018, my younger brother and I used to have several beehives and used a Raspberry Pi and various sensors to monitor the temperature and humidity of our hives. We also planned to implement a hive scale to observe honey production in summer and measure the weight in winter to see if the bees had enough food left. We never got around to doing that.

Our little monitoring solution was based on a Raspberry Pi 2 Model B, ran Raspbian Stretch (based on Debian 9), and had a temperature and humidity sensor connected (DHT11). We had three or four of those sensors in the hives to measure the temperature at the entrance hole, under the lid, and in the lowest frame. We connected the sensor directly to the Pi and used the Python\_DHT sensor library to read the data. We also set up InfluxDB, Telegraf, and finally, Grafana to visualize the data.

If you want to know more about our setup, we published an article on our little monitoring solution in Linux Magazine ([www.iwpcug.org/url/PiBees](http://www.iwpcug.org/url/PiBees)).

- **Heike Jurzik**

### **Go retro with the Raspberry Pi**

One thing I would love to create with the Raspberry Pi is a simulation of how to program machine language into an old-style computer using "switches and lights." This looks to be fairly straightforward using the GPIO pins on the Raspberry Pi. For example, their online manual shows examples of how to

use GPIO to switch an LED on and off or to use buttons to get input. I think it should be possible with some LEDs and switches, plus a small program running on the Raspberry Pi to emulate the old-style computer. But I lack the free time to work on a project like this, which is why I wrote the Toy CPU ([www.iwpcug.org/url/ToyCPU](http://www.iwpcug.org/url/ToyCPU)) to emulate it. - **Jim Hall**

## **Build a toy with the Raspberry Pi**

When my daughter was four, she asked for a "Trolls music box" for Christmas. She could picture it perfectly in her head. It would be pink and sparkly with her name on it. When she opened the box, the theme song from the popular movie would play. She could store her trolls and other treasures in the box. After searching everywhere online and in stores, I could not find one that measured up to her imagination. My husband and I decided we could build one ourselves in our own toyshop (i.e., his home office). The center of it all was, of course, the Raspberry Pi. He used light sensors and a Python script to make the song play at just the right moment. We placed the tech discreetly in the bottom of the music box and decorated it with her aesthetic in mind. That year, holiday magic was made possible with open source!  
- **Lauren Pritchett**

**AmyJune Hineline**

Originally published at <https://opensource.com/article/23/3/most-curious-uses-raspberry-pi>, this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License.



**Cambridge Assessment**  
International Education

32 years ago I got a grade 'B' for GCSE computer science. I was very pleased with myself, especially as I was 45 at the time. Recently the son of a friend of mine was planning to take his GCSE a year early as he is a bit of a whizz at it. So I had a look at some sample papers to see how well I might still be able to do. Big mistake. I think I would have scored about 2%. At least I kind of recognised what the questions were about. I don't recommend it, but if you search for "*Cambridge IGCSE Computer Science*" you too can admire the knowledge of anyone now passing their GCSE. And, of course, find other subjects!

**Roger Skidmore (GCSE 1991)**

## **My Cross Platform Approach**

I have found that proprietary software companies can go out of business or start charging too much. Or they allow my data to be stolen. Open source software is often the way forward, and I am happy when asked to donate to the likes of Wikipedia.

In terms of hardware platforms I aim to have my data available on PC and on my mobile phone so I can have it with me. Syncthing lets me keep the data synchronised on my Windows PC and Android mobile phone, without depending on a third party to provide storage. There is enough storage on the phone to make it possible.

There are also many cross-platform tools which provide syncing. One I use is Joplin, with Microsoft OneDrive set up as the synchronising path. Other methods are available. Google gmail works well as a cross platform tool and is my working address book. I can synchronise from this to the Thunderbird address book on my PC, although not in the other direction.

I also pay for ProtonMail which provides secure mail and secure storage. My ProtonMail address book holds any secure information like birthdays. This stuff should not be on Google which I regards as insecure. For my password manager I use Bitwarden which lets me access the vault on desktop or phone, and the paid option lets me share entries with my wife.

Many file formats work on the (Android) phone and on the PC (including .doc and .df). AndrOpen Office is Open Office for the phone but I find the screen area is inadequate for practical use on the phone. Instead I like to use files with Markdown format (.md) which does provide some formatting unlike plain text files. Markdown is used by Joplin and other cross-platform tools.

Currently on the phone I use Android Quckedit+ which handles many formats and codings including code formats. (The free version without the + is good also.) Opening a file with extension .md and entering text such as "#### MyHeading" gives a view with "MyHeading" shown in colour. Then click the > symbol to execute the code which shows the view with formatted header. Various flavour of markdown handle extras to a greater or lesser extent. For example some embed html tags and images.

There are many tutorials available to markdown format: see <https://www.markdownguide.org/>. This also lists various cross-platform notetaking and todo/scheduling tools such as Joplin, Obsidian and Typora, and sets out



how different flavours of markdown are supported.

On the PC I currently use Ghostscript to edit markdown files. To print from this it is necessary to export first to .html then print from a browser. On the other hand Typora can print directly and also can export as .html or as .pdf, so I am trying this out at present.

**Alex Lawson**

## **How 10 AI Writing Generators Can Help Boost Your Productivity**

I know that the writing process can be a long and arduous one. From brainstorming ideas to editing and proofreading, it can take hours to create a polished piece of writing. However, with the advent of AI writing generators, the writing process has become much easier and more streamlined. In this article, I'll discuss the benefits of using AI writing generators, as well as the top 10 generators available to help boost your productivity.

### **Introduction to AI Writing Generators**

AI writing generators are tools that use artificial intelligence to generate content. These tools are designed to help writers streamline their writing process, by providing them with ideas, suggestions, and even full-structured content. AI writing generators can help writers save time, improve their writing skills, and increase their productivity.

### **Benefits of using AI Writing Generators**

There are several benefits to using AI writing generators. First, they can save writers a lot of time. For example, if a writer is struggling to come up with ideas for a blog post, an AI writing generator can provide them with a list of topics to choose from. Additionally, AI writing generators can help writers improve their writing skills by providing them with suggestions on grammar, spelling, and sentence structure.

Another benefit of using AI writing generators is that they can help writers stay organized. For example, some generators allow writers to create outlines and templates for their content. This can help writers stay on track and ensure that their content is structured in a logical and coherent manner.

### **Top 10 AI Writing Generators to streamline your writing process**

1. **Grammarly** - This popular writing tool uses AI technology to check spelling, grammar, and punctuation errors in real-time.

2. **AI Writer** - This tool uses AI to generate entire articles, blog posts, and product descriptions.
3. **QuillBot** - This tool uses AI to rephrase sentences and paragraphs to improve clarity and flow.
4. **Writesonic** - This tool uses AI to generate catchy headlines, product descriptions, and blog post outlines.
5. **Textio** - This tool uses AI to analyze writing and provide suggestions on how to improve it.
6. **Zyro AI Writer** - This tool uses AI to generate website copy, blog posts, and product descriptions.
7. **Copysmith** - This tool uses AI to generate ad copy, product descriptions, and blog posts.
8. **Article Forge** - This tool uses AI to generate unique articles on any topic.
9. **WordAI** - This tool uses AI to rewrite articles and improve their readability and SEO.
10. **Articoolo** - This tool uses AI to generate high-quality articles on any topic in just a few minutes.

## **Free AI Writing Generators vs Paid AI Writing Tools**

While there are some free AI writing generators available, paid AI writing tools generally offer more features and better quality content. Free tools may be limited in their functionality and may not offer the same level of customization as paid tools. Additionally, free tools may have more limitations in terms of the amount of content they can generate or the quality of the content they produce.

## **How AI Writing Generators work**

AI writing generators work by using natural language processing (NLP) to analyze text and generate content based on that analysis. NLP allows the tool to understand the meaning behind the text and generate content that is relevant and accurate. AI writing generators can generate content in various formats, including articles, blog posts, product descriptions, and more.

## **How to choose the right AI Writing Generator for your needs**

When choosing an AI writing generator, it's important to consider your specific needs and requirements. For example, if you need help with grammar and spelling, a tool like Grammarly may be the best option. If you need help generating ideas, a tool like Writesonic may be more useful. Additionally, it's important to consider the cost of the tool, as well as any additional features it

may offer.

## **Tips for using AI Writing Generators effectively**

To use AI writing generators effectively, it's important to understand their limitations. While these tools can be incredibly helpful, they are not perfect and may make mistakes. Additionally, it's important to use these tools as a supplement to your own writing skills, rather than relying on them entirely. Finally, it's important to choose a tool that is user-friendly and easy to integrate into your writing process.

## **AI Writing Generator vs Human Writing - Pros and Cons**

While AI writing generators can be incredibly helpful, they are not a replacement for human writing.

## **Conclusion**

Of course, the real test of this would be to ask an AI writing tool to create an article, and for me to put the article into HotKey for you to see for yourself the results. In fact this is exactly what I have done! With the exception of this last paragraph the whole of this article was written by the Writesonic AI tool.

**David Groom & Writesonic!**

## **Using ChatGPT to Write Code**

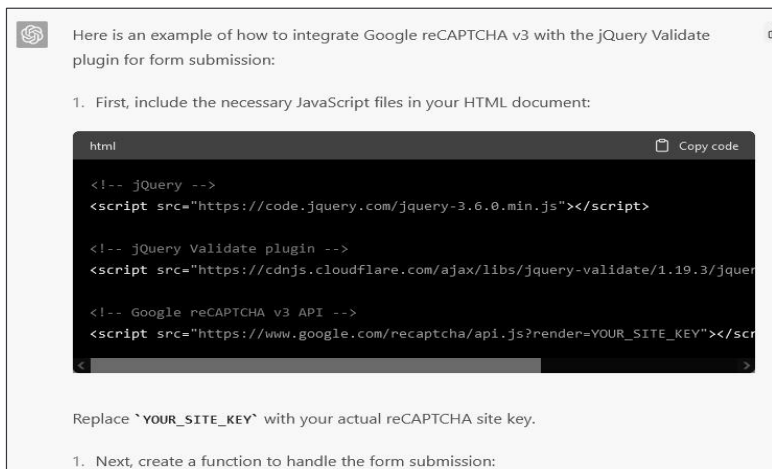
We saw above how AI tools can be used to write an article. I had read in the press over the last few months about how ChatGPT can also be used to generate programming code, and so I thought I would try it out.

A few weeks ago I needed some JavaScript code to work with an HTML form submission. There were two things which I wanted the JavaScript to do. Firstly I wanted to use a jQuery validation plug-in to check that all the required fields in the form had correct data, this is something I had done many times before and was no problem. Secondly I had decided to use Google reCAPTCHA v3 to try to block automatic completion and submission of the form by bots. In the past I had used other ways of trying to block bots, but these are increasing being bypassed as the bots become more sophisticated, resulting in many dummy form submissions.

I had never used reCAPTCHA before, but on the reCAPTCHA web site there were examples of how to integrate this into a form. However there were no examples of how integrate it into a form which also used the validation

plugin. I Googled the problem and found many suggested answers, none were exactly what I needed, but they led me down the right path, and after an hour of trial and error I had working code.

Now fast forward a few weeks to the time of me putting HotKey together. I decided to test how well ChatGPT would handle the task. I typed “generate javascript code to integrate google recaptcha3 and jquery validate plugin for form submission” (I hadn't checked my spelling very well!), and within a few seconds code started to appear on the screen together with instructions on how to use it. An example of the first part of what was output is shown below.



In total it generated 39 lines of code, a mixture of HTML and JavaScript. I pasted the code into my favourite code editor, whilst doing so I noticed the code which included the main JavaScript function was not wrapped with `<script></script>` tags, a curious, but trivial omission. I corrected that, and then tested it on my server, Google reCAPTCHA produced an error. It would appear that ChatGPT had mixed up two methods of invoking the reCAPTCHA script, simply removing one line of code fixed the error. Most interesting to me was the fact the part of the code which I had spent the hour of trial and error on a few weeks ago was written perfectly by ChatCPT.

Would I have quickly identified which one line of code I needed to remove, if I had not previously spent some time getting my own code working? I don't know. But what I do find interesting is how close to working code ChatGPT managed to come. JavaScript is not my favourite language to write, and I often find myself trying to debug code when attempting a something I have not tried before. ChatGPT will, I am sure, be one place I turn in the future when I get stuck on how to write a particular piece of code.

**David Groom**

## **Open source brings people together to provide aid in response to the earthquake in Turkey and Syria.**

Every day people use "open" to have an impact in their world. The Türkiye and Syria Earthquake Response includes over 9,000 people editing OpenStreetMap (OSM), partners providing open licensed satellite imagery, people generating and using open data, all collaborating across open source tools, like the HOT Tasking Manager (<https://github.com/hotosm/tasking-manager>). Having the most up-to-date and accurate map data helps humanitarian organizations and civil societies navigate the disaster areas, coordinate response, and conduct damage assessments. The OSM data is shared on the Humanitarian Data Exchange (an open platform for sharing data across crises and organisations. Launched in July 2014, the goal of HDX is to make humanitarian data easy to find and use for analysis) and is used to develop information management (IM) products for decision-makers. Some of the examples of information products are shared on these two open source built platforms: The Deep and the IFRC GO platform. Humanitarian OpenStreetMap Team (HOT) and the global OSM community are integral by connecting local communities and humanitarian organizations to urgent information.

A message sent by Dr Çevik, a Turkish surgeon treating people injured by the earthquake in Turkey, shows how important the use of these maps were, he said (translated):

*"In the first day I went to Reyhaniye, when Google Maps was not working, Organic Maps guided us. The importance of such tools is enormous. Good luck to you!"*

OpenStreetMap and Organic Maps, a free privacy-focused fork of Maps.Me, were used in conjunction for localized response.

In this video <https://www.youtube.com/watch?v=Wx3b9EtDwX8> Dr. Uçum from Kahramanmaraş is talking about how maps from OSM data have helped logistics and operations in the camps. The maps were subsequently used by local authorities to support planning and infrastructure in the camp site.

### **How we coordinated**

None of this happened over night. The success of OSM being integrated into a large scale active response is due to years of socialization and education on the part of OSM communities in Türkiye and beyond. Yer Çizenler, a local

NGO within the OSM Türkiye community aiming to raise awareness on open data and open mapping in the country, activated community mapping, and has coordinated with HOT since the early hours following the earthquake. For Syria, mapping and coordination is more complex because it's an ongoing conflict zone. HOT is working closely with OSM colleagues and partners to assess HOT tasks in Syria carefully. Precautions are taken to do no harm.

HOT's workflow involves rendering satellite imagery into small tasks which are managed in the HOT Tasking Manager. These tasking manager tasks were created based on the initial response assessments. Further news about damage in the extended area led to creation of newer tasks. Community outreach and the call to action started. Tasks continue to evolve as needed with partner organizations.

Initially, national and international organizations contacted the OSM teams. Next, coordination and communication networks were formed for data and information sharing. Yer Çizenler and HOT started contacting imaging providers (such as ITU CSCRS) for post-event imagery availability. All satellite imagery with Creative Commons license are uploaded to OpenAerialMap, an open data platform by HOT to share data freely. Additionally, Help.NGO supported the community by uploading drone images taken from the field. Thanks to free and open software, community members such as people from Kontur (disaster ninja), Iconem (search-satellite-imagery), and leafmap (OAM update), integrations to downstream applications are quickly adapted to increase data accessibility and usability.

A national volunteer community consisting of more than 1,200 people gathered during the first week following the event. Mapping tasks were supported with daily "mapathons" guided by the local communities. Overall, in just one month the global OSM community contributors were 8,414 people, including mappers from every region.

Additional datasets with ODBL compatible licenses gathered, organized editing activities led to enhance the OSM database with collapsed buildings, temporary shelter areas, pharmacies, health institutions, bakeries, supermarkets, groceries, and so on.

## **Open organizations evolve over years**

Key members and founders of Yer Çizenler first connected with OSM and humanitarian mapping following the Erciş earthquake in 2011. Over the following decade, they've organized workshops and mapathons with the mapping and tech communities of Turkey to build awareness and expand the

OSM user base where the community mainly consisted of individual contributors without much coordination. Open organizations take time to grow. Can and Orkut represented and connected the OSM-TR community with universities, governmental organizations, professional chambers, and other open communities in Turkey.

They also connected with the international OSM community through the State of the Map annual conferences, WeeklyOSM meetings, and HOT.

Yer Çizenler was founded in 2017 in order to set up a legal entity within the TR community. That followed with partnership with HOT on multiple field projects until 2021. Yer Çizenler currently operates as an open mapping volunteer group, coordinating with civil actors, advocating open data and open mapping in Turkey. These efforts to advocate for open methodologies, open data, and open source laid the groundwork for the response.

As it is an active humanitarian response, the team is focused on coordinating with humanitarian and civil society organizations. In the coming weeks and months, their attention is on supporting the active response and engaging the volunteer community to be part of OSM-TR community. Additionally, they are engaged in continuous trainings, mapathons, talks, and more.

One long term goal of Yer Çizenler is the documentation of its open workflows, with lessons from this response highlighting how to incorporate open source, open data, and open methodologies. There's much to learn on how to deliver interoperable and open solutions during emergencies to meet desperately important speed and quality of service.

**Heather Leson, Said Turksever, Batuhan Kavlak, Orkut Murat Yilmaz,| Can Unen**

Originally published at <https://opensource.com/article/23/3/open-source-open-data-humanitarian-response> this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License.

### **AI Image Generation**

In the October 2021 edition of HotKey I wrote an article entitled “This Person Does Not Exist” about one web site generating AI images. DALL-E2 (<https://openai.com/product/dall-e-2>) takes AI image generation further, they describe it as “an AI system that can create realistic images and art from a description in natural language”. See the back page for some examples.

**David Groom**





An image created by DALL-E2 using the prompt “a sunset behind woodland with fields and a tractor in front in the style of John Constable”



Three versions of a logo by DALL-E2 using the prompt “a logo for a club dedicated to personal computers”. Note that DALL-E does not respond well to generating text.

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