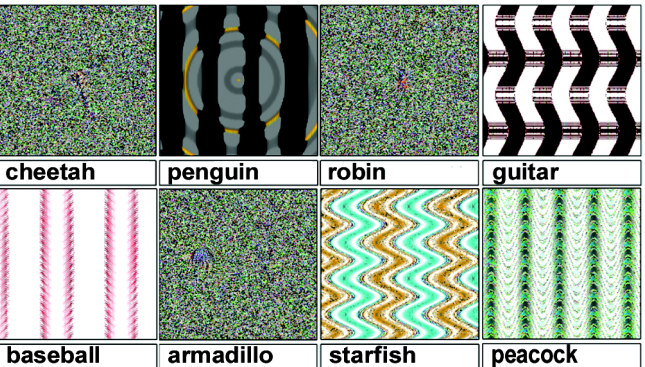


Maybe they could use some good teachers

## Machines see things differently

The age of **Artificial Intelligence** (AI), that great dream of robotics and computer engineers, seems to be dawning at last. Driverless cars are already on the prowl, being tested on the streets. Robots taking away most jobs have now become a real possibility. And an **online assistant** could be patiently waiting for your questions at home. It has been a long, difficult journey to get to this exciting place brimming with possibilities. There have been many wrong turns and dead-ends along the way, but scientists have finally devised methods allowing machines to learn. Like children, computers can now teach themselves how to relate to the complex world around them. We have enough data about how computers learn which shows that electronic brains teach themselves in significantly different ways from ours. This may have profound implications, for computers may thus think differently, too, arriving at unexpected conclusions. At worst, **machine learning** could become yet another failed promise. But one thing that is very likely to result from this discovery are novel ways to hack computers using the real world. Not only would such exploits be different from anything previously experienced, they would be hard to prevent or predict and they could have devastating real world consequences.



Images misidentified by computers

Con'td on back.

Much more than just a blogging tool

## WordPress rules the Web

The modern web is an amazing, colorful bazaar of sites, a kaleidoscope of images, typefaces, and functions, enabling one to find a nearby restaurant or peer across the universe with equal ease. All that diversity reflects the different means and technologies with which websites can be built and managed. But a surprisingly large number of sites – including **SWCP's own** – depend on the same basic publishing platform: **WordPress**. Over a quarter of the top *10 million* websites also currently use **WordPress**. It is the single most **widely-used** such system on the web, supporting over *76 million* blogs. Here at Southwest Cyberport, we have been WordPress enthusiasts for years, and strongly recommend it for just about anyone who wants to build a great site.

### Why WordPress

There are plenty of reasons, some obvious, some not so. In the first place, WordPress is **free and open-source**. That means there are no corporate proprietary limits – any user who knows how can tweak the platform however desired. But it's also remarkably easy to use even for those who know nothing about what goes on under the hood. Each site has an online dashboard unseen by visitors, where the administrator can write posts, set up galleries, determine the overall appearance, and so forth, even downloading/updating plug-ins, weeding comments or deciding just who can do what on the site.

But the most attractive thing about WordPress is the **incredible variety** of sites and appearances it supports. A WordPress installation can include blogs, photo galleries, forums, shopping carts, even multiple websites in a single package.

WordPress is, in fact, a true **Content Management System** (CMS), allowing the platform to do

Con'td on back.

*Machines see things differently, cont'd.*

## Finding patterns in noise

Imagine cruising along in a driverless car which comes up to a stop sign. Unnoticed by you, the sign has a small sticker on it. The car sees it, but instead of stopping, hurls past as if the sign wasn't even there, and an accident ensues.


The reason the car didn't stop was not because it didn't see the sign, but it didn't *register* as a sign. This is because self-learning visual recognition systems, like human vision, hunts for **patterns**.

But *which* patterns? People would instantly recognize the red octagon with or without stickers or even the word STOP. However, it's entirely possible that the machine learned totally different criteria. The height off the ground, the lack of other signs on the pole, maybe the white edging might be what it was looking for. Any variation simply does not compute as a stop sign.

The problem then with self-teaching machines is that we don't always realize *how* they do it. Thus, researchers have been collecting **visual patterns** that such computers misidentify. As shown on the previous page, some of these are slightly recognizable by humans, others are incomprehensible. A pattern that looks like random noise to us could be identified by a **deep neural network** as a robin, armadillo, or maybe a cheetah.

To speed identification, the machine seeks what it has learned to be key telling details, so it may not even really look at the entire picture, but just zooms in on the few pixels that make sense to it. Therefore, **changing** an image imperceptibly to humans could cause the computer to identify it as something else altogether.

The kinds of mischief that hackers could devise from this have yet to be determined. Partly it depends on how well they understand the algorithms they wish to mess with. But such assaults could range from catastrophic physical accidents to using adversarial data to hack content filters or evade security protocols to keep out malware.

Keeping humans in the loop might be a good idea. At least, broadly diverse learning and testing strategies for machines will need to be implemented. But ultimately, we should remain dubious of our electronic servants. Lest they behave unpredictably, we may need to keep a hand near the plug, at least for a while. 

*WordPress rules the Web, cont'd.*

things far beyond the capabilities of static sites, even allowing multiple writers and editors to collaborate on creating and modifying content.


## Behind the dashboard

Yet to do all this, WordPress relies on a few basic proven web technologies. These have been cleverly combined into specific functional modules to give the platform unmatched flexibility. Uncounted thousands of unique **themes** which determine every aspect of appearance and functionality are available, mostly free to use or reasonably priced, with more coming everyday.

**Themes** are easy to download and switch between, and many – especially **commercial** ones – can be highly customized, so that no two sites look the same. Many are also responsive, that is, they look and behave just as good on smartphones and tablets as on a desktop.

There's also a huge amount of **plug-ins** and widgets to do all kinds of specific tasks from spam blocking to search engine optimization, along with forums, importing/exporting content, juggling roles, holding polls, counting visits, etc.

The sky's the limit to what can be done with WordPress. Here at SWCP, we are very WordPress friendly. Our **Basic Web-hosting** package is designed to fit the needs of WordPress publishers. We also offer an inexpensive **WordPress update service**, so that we perform all the major updates (minor security updates are done automatically by WordPress) and monitor the site to ensure security and smooth functioning.

Building a website has never been easier, but you don't have to do it alone. At our **Ideas and Coffee** coworking space, we hold **regular gatherings** of WordPress enthusiasts, both newbies and experts, as well as special events. 



**Southwest Cyberport**

New Mexico's Expert Internet Service Provider since 1994

505-243-SWCP (7927) • [SWCP.com](http://SWCP.com) • [Help@swcp.com](mailto:Help@swcp.com)

5021 Indian School NE, Suite 600, Albuquerque, NM 87110

Archived at: <http://www.swcp.com/newsletters/>.  
Click on **blue terms** in PDF file to open links.