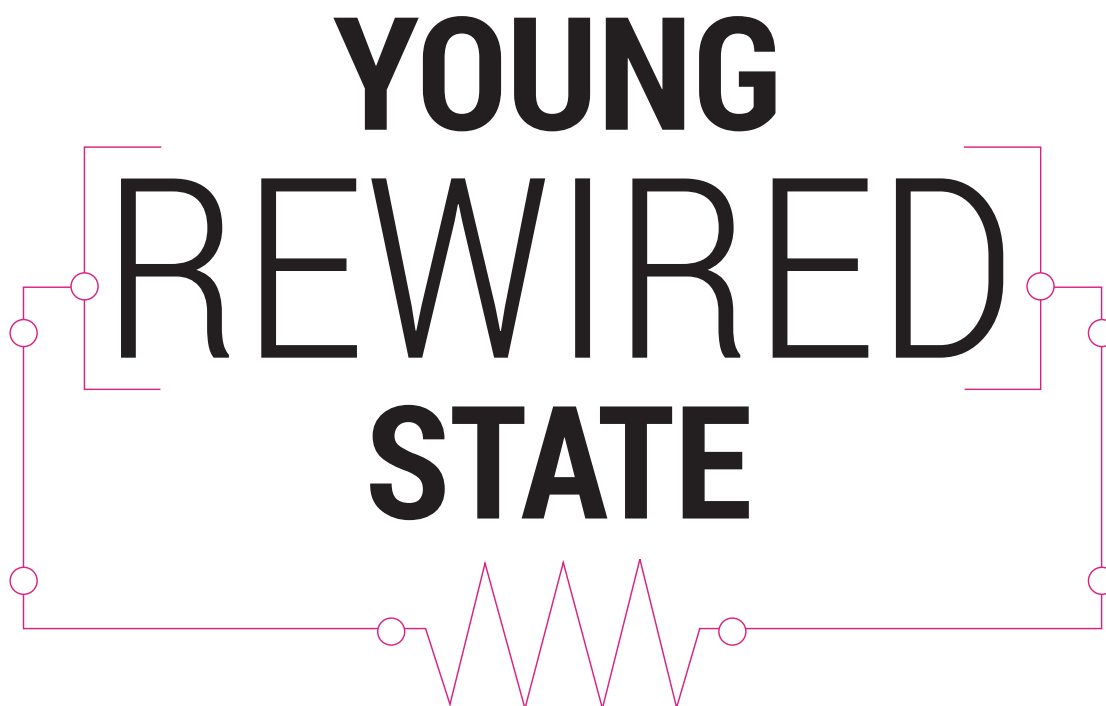


YOUNG REWIRED STATE



Look inside the philanthropic project that's fostering the next generation of coders, with **Mayank Sharma**.

"Open data teaches you that you can make the world a better place – not everything has to be closed up, and it's nice to share things like that, as it can be interpreted in many ways, for many things!" This sage advice doesn't come from a veteran open data advocate, but rather from 14-year-old George Streten. Streten is one of the hundreds of kids, all under 18, who have received neural enhancement at the Festival of Code event organised by Young Rewired State (YRS).

"We are about finding those young programmers and bringing them together at open events around the world introducing them to open data, and each other", explains Emma Mulqueeny, the founder of YRS.

At the events, the kids collaborate with their peers to build projects based on any of the various publicly available real-world open data sets. Mulqueeny is not just a vocal proponent of open data but also played a pivotal role in showcasing its potential to Government officials, which eventually led to the birth of the UK government's open data portal, **data.gov.uk**.

While she was conducting hack days for the government, Mulqueeny noticed that all the coders were older than 25 years of age. So in 2009, "a small group of us decided that we needed to bring the open government data revolution to the next generations", writes Mulqueeny on her blog.

So in August 2009, she along with a bunch of friends, organised a weekend event, christened Young

Rewired State, at Google HQ in London with the intention of introducing open data to kids under the age of 18.

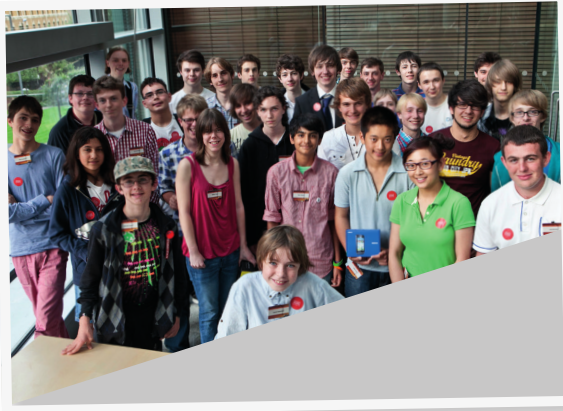
To her surprise, just three kids signed up for the free event! It took the organisers three months, and a huge credit card bill for hotels and trains, to find students from all over the UK to fill up the quota of 50 seats.

That experience gave Mulqueeny an unprecedented insight into the ICT education in schools around the UK. Students shared their frustrations of being let down by a curriculum that did not support technical skills or computer science and forced these enterprising students to teach themselves.

Rather than being disheartened, Mulqueeny resolved to give these self-taught kids, who had been programming in isolation, a platform on which they could interact with like-minded peers. By 2010 she had quit her job and founded Rewired State, a for-profit enterprise that organises hack days and has a network of more than 1,000 software developers and designers. YRS became a philanthropic arm of Rewired State, meaning that, unlike Rewired State, YRS is a non-profit social enterprise.

Festive season

YRS has been organising hackathons for kids ever since. From a weekend-long session in 2009 the event is now a week-long affair, and the number of participating kids has been gradually rising.



Young Rewired State has grown from 50 participants in 2009 to over 1,000 today.

While YRS is involved in various activities to engage with coding kids through the year, it brings young coders together from across the UK once a year in a meeting called the Festival Of Code. This stretches over a week, during which kids create all sorts of coding projects. All the apps are built around open data -- from something as simple as a website to access data to apps that turn that data into meaningful information.

The event is held in the first full week of August of every calendar year. The event works by gathering kids at local centres all across the UK. At the centres, the kids are encouraged to pair up with their peers, although they are free to work on their own as well.

They can create anything they want, using any types of programs or equipment they've brought along. The only requirement is that the project must include at least one open data set. Mentors are

Tyriah Taylor, 10



I kept asking my mum for a new 3DS and games for my Nintendo DSi and Wii. Eventually, my mum got annoyed and told me that I could make my own games. She started looking for computer clubs and that is when she found Young Rewired State.

I didn't think it was going to be very interesting. However, right from when I got there we had talks and tours of the venues. We had practice sessions for our presentations for the Festival Of Code, which helped build our confidence. Young Rewired State is one of the best experiences I have ever come across and it was great fun!

The first YRS event I went to was at the Rutherford Appleton Laboratory [in Oxford]. I learnt some Python, and we made a game in Game Maker called Food Fetcher. Last year I went to the Microsoft Campus in Reading and I learnt some HTML, CSS and PHP. We made a website called Top Tweets, which is a Twitter search engine, where you put in a word or hashtag and it returns the top 3 most retweeted and favoured tweets containing that word/hashtag.

We don't have any workshops at my school. We have Scratch, but I don't think anyone else knows how to use it, except me. I can't wait for YRS 2014 and I am hoping that some of my friends will be coming along as well.

available on-site at each local centre and even online at the YRS IRC channel. The mentors assist the kids with their projects.

From Monday to Thursday the young programmers assemble at their centres and hack on their projects to create a functional prototype. On Friday, everyone from across all centres travels to and assembles at a central location in the UK to present their work to a panel of judges.

Until 2013, the festival culminated in the Custard Factory in Birmingham. This year that venue has shifted, and the weekend will be held at the University of Plymouth.

Over the weekend, the young coders will present their projects to a panel of judges during the

"YRS brings young coders together once a year in an event called the Festival Of Code."

George Straten, 14

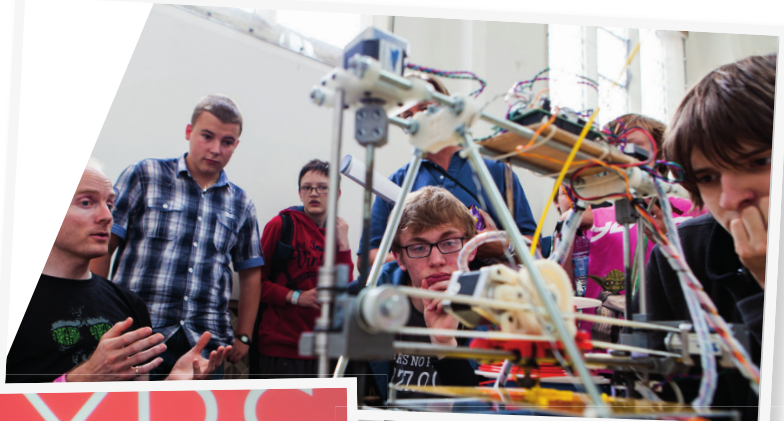


I heard about Young Rewired State from a friend. I hadn't met him in person before; we'd met on Twitter. He invited me to write for his blog, and while chatting to him on one of the numerous Skype calls that we had, he mentioned it. I don't really know what I expected from

the event to be fair. If I'm honest, I expected it to be a little dull, but throughout the week, my opinions couldn't have changed more dramatically... I really enjoyed the event!

We created a lost and found website, for the whole of the UK. I created a 30-second video advertisement for it too. At school, we never have any experiences like this. We don't ever have IT based workshops, which is a huge shame, so it was different from anything that I'd ever experienced.

Young Rewired State's Festival of Code not only is an amazing opportunity, but an opportunity to meet people. I've met a huge community of amazing people, which I've stayed part of through various social media platforms, such as Twitter -- without YRS, I would never have met such talented people. Once I'm over 18, the maximum age limit to attend as a participant, I hope to join Young Rewired State, and help other people like me to engage with others and share their talents.





Emma Mulqueeny, Young Rewired State's founder, has in the absence of government policy been preparing kids for the future since 2009.

preliminary heats and the semi-final rounds that will be held on Saturday, and the finale on the Sunday. Their friends and family members are welcome to attend and watch over the proceedings.

Going global

In five years, YRS has grown from a single weekend event with 50 young coders to a week-long event across the UK. Now Mulqueeny and the YRS team are reaching outside the UK in order to foster young programmers in other countries.

The YRS International events are held under the banner of the YRS Everywhere program. The idea with YRS Everywhere is to replicate the scale that has been

tested in the UK. The events are currently restricted to a weekend, just like the first YRS event in 2009. It'll then be extended to a whole week and stretched to multiple centres across the new country.

The first YRS Everywhere event was held in 2013 in New York in collaboration with a number of networks such as Mozilla Hive and the Museum of the Moving Image in New York.

Just like the first-ever YRS event in 2009 in the UK, the event in New York also invited 50 kids for a two-day hackfest. During the event they worked with open data local to the US and came up with projects that were of local interest. The kids programmed under the guidance of local developers as well as YRS's worldwide mentor network.

The event in New York was followed by a similar two-day hackfest in Berlin, again with the help of well-known local networks such as SAP and the Open Knowledge Foundation. Just before the close of the year, the team went back to the USA, this time for an event in San Francisco. In 2014, the network is planning a YRS Everywhere event in Asia in Singapore.

The YRS Everywhere events follow the same pattern as the Festival of Code. On the first day the participants form groups and choose the open data set that they will work on. They work on their projects till the afternoon of the next day. In the evenings the hacks are presented to the panel of judges.

You don't have to be an ace coder to participate in a YRS event. In fact, according to the YRS website, the

Planning a YRS event

Organising an event that runs simultaneously all across the country and involves over a thousand kids is no small feat. But Emma Mulqueeny and her small team manage to pull it with relative ease. So we asked her: What does it take to organise a YRS event?

"Crikey, a lifetime!", exclaimed Mulqueeny. "As with running any hack weekend, the practicalities are about venue, Wi-Fi and power," she explains. Once that's taken care they focus on "who and how to recruit" which applies to both the participating kids and their mentors. Next up is selecting the panel of judges and the prizes. An important aspect of any YRS event is access to local open data. Mulqueeny says it "is critical, as we try to make this about local challenges."

"For the Festival of Code, centrally we deal with all of the logistics and fundraising, but centres act as our outposts," she continues,

pointing to her website, which details the requirements for a centre. They also have a team that check the credentials of the registered mentors. "We do not provide training for them, but we connect mentors from previous events with new mentors so that they can ask any questions they have."

Beyond their main event, Mulqueeny says that the YRS Everywhere events are relatively simple to setup. "The organisers apply and we check their credentials: have they run hack weekends before, do they have access to a developer network versed in Open Data to act as mentors, and so on."

If the organisers meet these criteria, Mulqueeny and her team guide them to find the young participants, based on their experience, and support them remotely. If required, the organisers can pay them to put together a team to help run the event.



These kids aren't just learning a new skill; they're sharing, and learning from each other.

youngest participant in the 2013 edition of Festival of Code was a mere five years old!

If you have basic programming skills, you are good enough to be a part of YRS. The group accepts coders of all levels; however, it helps if you at least have a very basic understanding of HTML. There are no lessons in programming dispensed at the Festival of Code event. Instead, the event helps young people learn from and teach each other.

Low barrier to entry

According to an FAQ on its website "The only thing we ask is that when you come along you get involved and use your skills to the best of your ability, and we encourage you to be adventurous in your learning."

To encourage more participation YRS has introduced the Google Assemblies program in partnership with Google. The idea behind the program is to introduce kids to YRS and coding.

During a Google Assembly, a YRS participant gives an assembly presentation at their school. They are assisted by YRS mentors to prepare for the presentation using slide decks, videos and YRS and Google swag.

With these assemblies, YRS intends to connect with young students via one of their peers who can share their experience about the event and encourage participation with their enthusiasm. They are hopeful that the association with Google will help demonstrate how important their talents are to a multinational marquee brand that everyone can connect with.

Pitch in!

According to Thom Brooks of YRS, organising the 2014 edition of the Festival of Code will cost them around £250,000. That's quite a sum to raise, and being a non-profit organisation they rely on sponsorship from individuals and institutions.

If you appreciate the work of Young Rewired State and wish to donate, you can email Emma Mulqueeny at emma@rewiredstate.org for the official channels of donation. The idea behind all YRS events, including the Festival of Code, isn't to make any profit. All the funds received are used towards organising the festival itself as well as for the fund to support families who can't spare the monetary resources required to cover the associated travel costs.

Besides direct monetary help there are several other ways you can help the initiative. If you have a large room or a conference hall that you can spare for a week, you can sign up with YRS as a Festival of Code Centre. You'll also have to assign an individual who will be the centre lead. When you register as a centre, YRS will work with you to make sure you're all set up well in advance. You'll be listed on their website and participants will be assigned to you based on their geographic proximity.

You can also register your centre as a Hyperlocal Centre. Such a centre allows participants to continue working on their prototypes even after the Festival of



Young Rewired State isn't about coding for the sake of it: the emphasis is on using open data to improve participants local areas.

Code event has come to an end. The Hyperlocal program is designed to ensure that the prototypes designed during the week complete the journey to a finished product.

The Hyperlocal centres will run sessions where the kids can come back to work on their projects under the guidance of their mentors. The YRS team will help prepare the centre to run sessions as per the schedule that suits the centre.

If you have programming skills but are over 18 and can't participate in the events as a coder, you can lend your skills and expertise and volunteer as a mentor. YRS has a thriving mentor community. Traditionally mentors for the YRS events have been drawn from the Rewired State network, but that requirement has been relaxed with their growing popularity.

"If you're over 18 and have programming skills you can lend your experience as a mentor."

If you fancy getting involved, the YRS website has loads of information on what it expects from a mentor. Mentors don't necessarily have to be physically present at a centre and can even guide the coders remotely from anywhere in the world. YRS is growing both within and outside the UK. After establishing a model for scaling the hackfest, the team is replicating it in other parts of the world, encouraging kids to solve their local civic problems with open data and open source code. 