

Climate Change Hackathon: Combining Technology and Activism for Peace  
Philippines  
Princeton University  
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“What my country is going through as a result of this extreme climate event is madness; the climate crisis is madness!” uttered Yeb Saño, chief envoy for the Philippines at the failed November 2013 Warsaw climate talks. He was referring to Super Typhoon Haiyan, which only days before struck the Philippines with force equivalent to three Hurricane Katrinas, leaving over six million refugees and two million homeless. The energy generated by this massive storm was 10 times more powerful than the Hiroshima atomic bomb. Unfortunately for the Philippines and the world, the failure of world governments to find a solution to climate change guarantees that disasters of this magnitude will become increasingly commonplace. In a recent volume of the journal *Nature*, researchers from Princeton document that even slight spikes in temperature and precipitation, which are a result of global warming, significantly increase the risk of violent acts such as rape, murder and assault. The official death toll of Haiyan stands at more than 6,300, and if climate change continues unabated the casualties from future climate related disasters could exceed this by several orders of magnitude. Global warming threatens peace globally, and where governments have failed, grassroots action now affords the only democratic, viable alternative for preventing the climate catastrophe.

As above ecological nightmare unfolded, halfway across the globe in Princeton, NJ computer programmers, web designers and entrepreneurs were busy building mobile applications (apps) at HackPrinceton, a 48-hour hackathon. Hackathons are events in which teams of computer coders, developers and organizers compete to solve a problem by building a website or an app within a specified time period, usually one to three days. HackPrinceton's winning team “What Would I Say,” created an app that generates humorous Facebook status updates, and included a button in their application to donate money for Typhoon relief. In the days following HackPrinceton, we found ourselves staying up late in our common room discussing the possibilities of using technology as a tool for social justice, especially as it relates to the climate crisis. We wondered, what if the same energy that went into the development of YouTube or LinkedIn was applied to conservation, recycling or disaster relief? Hackathons could provide the venue for coordinating grassroots efforts to create technology that solves the climate problem.

We plan to organize the first ever hackathon in the Philippines dedicated to mitigating and adapting to climate change. At a planned 72 hours, it will also break records for the longest hackathon ever hosted there. The Philippines has a large community of tech savvy young people (Smart Developer's Network, our affiliate group in the Philippines, has over 10,000 members), a high rate of mobile phone ownership (1.25 phones per person) and a high proportion of Anglophones (92 percent). In October, the Philippine government sponsored a tax reform based hackathon, and the winning application allows government offices to collect taxes online or through smart phones. Additionally, compared with other English speaking countries, hosting a hackathon in the Philippines will provide a better experience for the same price. Our project will harness the creative energies that hackathons engender to help Filipino youth fight climate change and mitigate the effects of natural disasters in their home and around the world. For these reasons, we believe the Philippines is the ideal location for our climate change focused hackathon.

The latest tools, technologies and advances in computing are shared at hackathons through workshops. For theme-driven hackathons like ours, domain specialists run non-technical workshops to bring coders up to speed with the substance of a particular field. For instance, at a neuroscience hackathon one might find a neurosurgeon giving a talk on how the brain works while at a finance technology hackathon one might find an accountant explaining double entry bookkeeping. Jacob's experience educating teenagers about climate change in Washington, D.C. will allow us to organize panels and seminars to create environmental awareness and foster an ethic of conservation among the participants. A Filipina climate change activist, Erin Sinogba, whom Jacob befriended while campaigning for climate action with 350.org, has connected us with several climate justice organizations in the

Philippines. Local activists from Powershift, 350.org, and Greenpeace Philippines have partnered with us to run workshops on the scientific, political and social realities of climate change.

Because hackathons emphasize the sharing of ideas, knowledge and tools for innovation, they directly contribute to peaceful and cooperative relations between peoples. In fact, the word “hackathon” is a portmanteau of the words “hack” and “marathon”, where “hack” is used in the sense of playful, exploratory or collaborative programming, not its alternate meaning as a reference to computer crime. We hope to re-create the fruitful intersection of computer coding and social justice that came together at OccupyData, a hackathon organized by Miguel during his time as an Occupy Wall Street activist. As an experienced computer programmer, Miguel can administrate technical workshops taught by local coders. It may be tempting to measure our project’s success by the number of downloads or views which apps created at the hackathon receive, but we believe our success should also be measured by the strategic partnerships fostered in the fight against climate change, which will last long after our event concludes.

One of the most exciting aspects about hackathons is the unpredictability of the outcome. While many traditional initiatives attempt to achieve social justice by pouring resources into ventures with fixed goals and thus limited outcomes, the creativity of the Filipino people is potentially limitless. There is a distinct possibility that our hackathon will produce a truly revolutionary application that will transform the way people think about climate change. At the 2014 meeting of the American Economic Association, Jacob heard the world’s foremost environmental economist William Nordhaus state that the biggest unknown factor in modelling climate change, more than scientific uncertainty, is technological advance which is truly unpredictable. By bringing together the disparate communities of computer programmers and environmental activists, our hackathon offers an opportunity to develop novel, previously unexplored solutions to the environmental problems at hand.

We plan to arrive one week in advance of the event to coordinate logistics. On day one, we will have an opening plenary followed by ice-breakers and workshops led by the local environmental activists. On day two, the coding portion of the hackathon will commence and the attendees will break into teams. On the third day, the contestants will demonstrate their apps and monetary prizes will be awarded. Many winning ideas often require additional development time to become viable tools, products or businesses. Thus, after the competition, we will stay in the Philippines for three weeks to offer technical and organizational support for the two best teams to polish their climate change mitigation applications.

Angels for Angels, an NGO which connects angel investors to social entrepreneurs, has agreed to provide logistical support for our project. We have also contacted SocialTagg, a start-up that will be assisting us in the administration of the hackathon. Rappler, a Philippine media start-up founded by Maria Ressa, Princeton class of ’85, has agreed to document the event. Our friend Alex Donn at AT&T has generously offered to host the Hackathon at AT&T’s Philippine headquarters and conditionally match any funding provided by Davis Projects for Peace. The matching funds will be used to cover the prize money, lodging and food for the participants, freeing up resources to provide a travel stipend to anyone in the Philippines so that geography is no longer a barrier to participation.

By their nature, the fruits of hackathons are sustainable. The beauty of the ‘hacker’ ethos is that software apps developed at hackathons can be accessed all over the world at minimal cost and virtually zero carbon footprint. We believe that social technologies can catalyze ecological action in the Philippines. The strong linkages between activists and coders forged at our event will make a lasting contribution to the project of world peace. By developing tools to mitigate and alleviate global warming, our hackathon will unlock the potential of the Philippines to make good things happen quickly in the struggle against climate change.

### **Supporters/Advisors**

Local Activists: Erin Sinogba (350.org), John Chuidian (Angels for Angels), Powershift, Greenpeace

Hacker Contacts: Paul Pajo (SmartDevNetwork), Diego Jose Ramos (AngelHack)

Media Allies: Patricia Seranno (Fresh Traveler), Maria Ressa (Rappler.com),

Administrative partners: Jade Shyu (SocialTagg), Alex Donn (AT&T), Peter Burgess (TrueValueMetrics)