Hackathon

A **hackathon** (also known as a **hack day**, **hackfest** or **codefest**) is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others, often including subject-matter-experts, collaborate intensively on software projects.[1]

The goal of a hackathon is to create usable software. Hackathons tend to have a specific focus, which can include the programming language used, the operating system, an application, an API, or the subject and the demographic group of the programmers. In other cases, there is no restriction on the type of software being created.

Yahoo! Internal Hack Day Event at Yahoo! HQ (Sunnyvale, CA, USA), June 6, 2006

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Etymology

The word "hackathon" is a portmanteau of the words "hack" and "marathon", where "hack" is used in the sense of exploratory programming, not its alternate meaning as a reference to computer crime. The term seems to have been created independently by both the developers of OpenBSD and the marketing team of Sun; these usages both first happened in 1999.

OpenBSD's apparent first use of the term referred to a cryptographic development event held in Calgary on June 4, 1999,[2] where ten developers came together to avoid legal problems caused by export regulations of cryptographic software from the United States. Since then, a further three-to-five events per year have occurred around the world to advance development, generally on university campuses.

For Sun, the usage referred to an event at the JavaOne conference from June 15 to June 19, 1999; there John Gage challenged attendees to write a program in Java for the new Palm V using the infrared port to communicate with other Palm users and register it on the Internet.

Starting in the mid to late 2000s, hackathons became significantly more widespread, and began to be increasingly viewed by companies and venture capitalists as a way to quickly develop new software technologies, and to locate new areas for innovation and funding.[1] Some major companies were born from these hackathons, such as GroupMe, which began as a project at a hackathon at the TechCrunch Disrupt 2010 conference; in 2011 it was acquired by Skype for $85 million.[1] The software PhoneGap began as a project at the iPhoneDevCamp (later renamed iOSDevCamp) in 2008;[3] the company whose engineers developed PhoneGap, Nitobi, refocused itself around PhoneGap, and Nitobi was bought by Adobe in 2011 for an undisclosed amount.[4]

Structure

Hackathons typically start with one or more presentations about the event, as well as about the specific subject, if any. Then participants suggest ideas and form teams, based on individual interests and skills. Then the main work of the hackathon begins, which can last anywhere from several hours to several days. For hackathons that last 24 hours or longer, especially competitive ones, eating is often informal, with participants often subsisting on food like pizza and energy drinks. Sometimes sleeping is informal as well, with participants sleeping on-site with sleeping bags.[1]

At the end of hackathons, there is usually a series of demonstrations in which each group presents their results. To capture the great ideas and work-in-progress often people post a video of the demonstrations, blog about results with screenshots and details, share links and progress on social media, suggest a place for open source code and generally make it possible for people to share, learn from and possibly build from the ideas generated and initial work completed. There is sometimes a contest element as well, in which a panel of judges select the winning teams, and prizes are given. At many hackathons, the judges are made up of organizers and sponsors. At BarCamp-style hackathons, that are organized by the development community, such as iOSDevCamp, the judges are usually made up of peers and colleagues in the field. Such prizes are sometimes a substantial amount of money: a social gaming hackathon at the TechCrunch Disrupt conference offered $250,000 in funding to the winners,[1] while a controversial[5] 2013 hackathon run by Salesforce.com had a payout of $1 million to the winners, billed as the largest-ever prize.[6]

Types of hackathons

For an application type

Some hackathons focus on a particular platform such as mobile apps, a desktop operating system, web development or video game development

Mobile app hackathons like Over the Air, held at Bletchley Park, England, can see a large amount of corporate sponsorship and interest.[7][8]

Science Hack Day Nairobi 2012

Music Hack Day, a hackathon for music-related software and hardware applications, is a popular event, having been held over 30 times around the world since 2009.[9] Also Music Tech Fest, a three-day interdisciplinary festival for music ideas bringing together musicians with hackers, researchers and industry, features a hackathon.[10] Similarly, Science Hack Day, a hackathon for making things with science, has been held over 45 times in over 15 countries around the world since 2010.[11]

Hackathons have been held to develop applications that run on various mobile device operating systems, such as Android,[12] iOS[13] and MeeGo.[14] Hackathons have also been held to develop video-based applications and computer games.[15] Hackathons where video games are developed are sometimes called game jams.

"TV Hackfest" events have been held in both London[16] and San Francisco,[17] focusing mainly on social television and second screen technologies. In TV Hackfests, challenge briefs are typically submitted by content producers and brands, in the form of broadcast industry metadata or video content, while sponsors supply APIs, SDKs and pre-existing open source software code.[18]

Hackathons have also been used in the life sciences to advance the informatics infrastructure that supports research. The Open Bioinformatics Foundation ran two hackathons for its member projects in 2002 and 2003, and since 2010 has held 2-day "codefests" preceding its annual conference.[19] The National Evolutionary Synthesis Center has co-organized and sponsored hackathons for evolutionary bioinformatics since 2006.[20][21] BioHackathon[22] is an annual event that started in 2008 targeted at advancing standards to enable interoperable bioinformatics tools and Web services. Neuroscientists have also used hackathons to bring developers and scientists together to address issues that range from focusing on a specific information system (e.g., Neurosynth Hackathon[23] and the Allen Brain Atlas Hackathon[24]) and providing reserved time for broad scientific inquiry (e.g., Brainhack),[25] to using specific challenges that focus hacking activity (e.g., HBM Hackathon).[26]

Using a specific programming language, API, or framework

There have been hackathons devoted to creating applications that use a specific language or framework, like JavaScript,[27] Node.js,[28] HTML5[29] and Ruby on Rails.[30]

Some hackathons focus on applications that make use of the application programming interface, or API, from a single company or data source. Open Hack, an event run publicly by Yahoo! since 2006 (originally known as "Hack Day", then "Open Hack Day"), has focused on usage of the Yahoo! API, in addition to APIs of websites owned by Yahoo!, like Flickr.[31] The company's Open Hack India event in 2012 had over 700 attendees.[32] Google has run similar events for their APIs,[33] as has the travel guide company Lonely Planet.[34]

The website Foursquare notably held a large, global hackathon in 2011, in which over 500 developers at over 30 sites around the world competed to create applications using the Foursquare API.[35] A second Foursquare hackathon, in 2013, had around 200 developers.[36] The IETF organizes Hackathons for each IETF meetings with are focused on IETF Internet Draft and IETF RFC implementation for better interoperability and improved Internet Standards.[37]

Hackers.mu remotely working on TLS 1.3 during the IETF 100 Hackathon

For a cause or purpose

There have been a number of hackathons devoted to improving government, and specifically to the cause of open government.[38] One such event, in 2011, was hosted by the United States Congress.[39] Starting in 2012, NASA has been annually hosting the International Space Apps Challenge.

In 2014, the British government and HackerNest ran DementiaHack,[40] the world's first hackathon dedicated to improving the lives of people living with dementia and their caregivers.[41][42] The series continues in 2015, adding the Canadian government and Facebook as major sponsors.[43]

The Global Game Jam, the largest video game development hackathon,[44] often includes optional requirements called 'diversifiers'[45] that aim to promote game accessibility and other causes.

Various hackathons have been held to improve city transit systems.[46] Hackathons aimed at improvements to city local services are increasing, with one of the London Councils (Hackney) creating a number of successful local solutions on a 2 Day Hackney-thon[47] There have also been a number of hackathons devoted to improving education, including Education Hack Day[48] and on a smaller scale, looking specifically at the challenges of field work based geography education, the Field Studies Council[49] hosted FSCHackday.[50] Random Hacks of Kindness is another popular hackathon, devoted to disaster management and crisis response.[51] ThePort[52] instead is a hackathon devoted to solving humanitarian, social and public interest challenges. It's hosted by CERN with partners from other non-governmental organizations such as ICRC and UNDP.

As a tribute or a memorial

A number of hackathons around the world have been planned in memory of computer programmer and internet activist Aaron Swartz, who died in 2013.[53][54][55][56]

The judging panel (seated, left) at DementiaHack asking questions of a team that just demoed their project (standing, right).

Developers at the 2011 Rewired State "National Hack the Government Day"

For a demographic group

Some hackathons are intended only for programmers within a certain demographic group, like teenagers, college students,[1] or women.[57]

Hackathons at colleges have become increasingly popular, in the United States and elsewhere. These are usually annual or semiannual events that are open to college students at all universities. They are often competitive, with awards provided by the University or programming-related sponsors. Many of them are supported by the organization Major League Hacking, which was founded in 2013 to assist with the running of collegiate hackathons.

PennApps at the University of Pennsylvania was the first student-run college hackathon; in 2015 it became the largest college hackathon with its 12th iteration hosting over 2000 people and offering over $60k in prizes.[58][59] The University of Mauritius Computer Club and Hackers.mu organized a Hackathon dubbed "Code Wars" focused on implementing an IETF RFC in Lynx in 2017.[60][61]

ShamHacks at Missouri University of Science and Technology is held annually as an outreach activity of the campus's Curtis Laws Wilson Library. ShamHacks 2018[62] focused on problem statements to better quality of life factors for US veterans, by pairing with veteran-owned company sponsors.[63]

For internal innovation and motivation

Some companies hold internal hackathons to promote new product innovation by the engineering staff. For example, Facebook's Like button was conceived as part of a hackathon.[64]

To connect local tech communites

Some hackathons (such as StartupBus, founded in 2010 in Australia) combine the competitive element with a road trip, to connect local tech communities in multiple cities along the bus routes. This is now taking place across North America, Europe, Africa and Australasia.[65]

Code sprints

In some hackathons, all work is on a single application, such as an operating system, programming language, or content management system. Such events are often known as "code sprints", and are especially popular for open source software projects, where such events are sometimes the only opportunity for developers to meet face-to-face.[66]

Code sprints typically last from one week to three weeks and often take place near conferences at which most of the team attend. Unlike other hackathons, these events rarely include a competitive element.

Examples of code sprints

- This was pioneered by the Zope, who completed in excess of 30 sprints between January 2002 and January 2006.[67]
- The annual hackathon to work on the operating system OpenBSD, held since 1999, is one such event; it was a pioneering hackathon that may have originated the word "hackathon".
- Programming languages that have had such hackathons include Perl (for both development[68] and QA[69]), Haskell[70] Scala[71] and the PyPy interpreter for Python.[72]
- LibreOffice,[73] Drupal[74] and MediaWiki[75] are other applications that hold development hackathons.

Controversies

- A team at the September 2013 TechCrunch Disrupt Hackathon presented the TitStare app, which allowed users to post and view pictures of men staring at women's cleavage.[76] TechCrunch issued an apology later that day.[77]
- A November 2013 hackathon run by Salesforce.com, billed as having the largest-ever grand prize at $1 million, was accused of impropriety after it emerged that the winning entrants, a two-person startup called Upshot, had been developing the technology that they demoed for over a year, and that one of the two was a former Salesforce employee.[5]
- Major League Hacking expelled a pair of hackers from the September 2015 hackathon Hack the North at the University of Waterloo for making jokes that were interpreted as bomb threats, leading many hackers to criticize the organization.[78] As a result of the controversy, Victor Vucicevich resigned from the Hack the North organizing team.[79]

See also

- Game Jam
- Installfest
- Editathon
- Charrette
- Startup Weekend
- Campus Party

References

1. The Hackathon Is On: Pitching and Programming the Next Killer App (https://www.wired.com/magazine/2012/02/f_h ackathons/all/1), Steven Leckart, *Wired*, March 2012
2. "OpenBSD Hackathons" (http://www.openbsd.org/hackathons.html) OpenBSD. Retrieved 2015-04-10.
3. PhoneGap: It's Like AIR for the IPhone (http://phonegap.com/2008/09/18/phonegap-it%E2%80%99s-like-air-for-the-i phone/) Archived (https://web.archive.org/web/20130310003249/http://phonegap.com/2008/09/18/phonegap-it%E 2%80%99s-like-air-for-the-iphone/) 2013-03-10 at the Wayback Machine, Dave Johnson, *PhoneGap Blog*, 18 September 2008
4. Adobe Acquires Developer Of HTML5 Mobile App Framework PhoneGap Nitobi (https://techcrunch.com/2011/10/03/ adobe-acquires-developer-of-html5-mobile-app-framework-phonegap-nitobi/) Leena Rao, *TechCrunch*, October 3, 2011
5. Biddle, Sam (November 22, 2013). "The "Biggest Hackathon Prize In History" Was Won By Cheaters" (http://valleyw ag.gawker.com/the-biggest-hackathon-prize-in-history-was-won-by-che-1469710101) *Valleywag*.
6. Williams, Alex (November 21, 2013). "Two Harvard University Alum Win Disputed Salesforce $1M Hackathon Prize At Dreamforce [Updated]" (https://techcrunch.com/2013/11/21/two-harvard-university-alum-win-salesforce-1m-hacka thon-prize-at-dreamforce-for-mobile-service-to-create-reports/) *TechCrunch*.
7. Hackers Get Hired At Bletchley Park (http://www.huffingtonpost.co.uk/2011/09/16/hackers-get-hired-at-blet_n_96624 6.html) Archived (https://web.archive.org/web/20110926233338/http://www.huffingtonpost.co.uk/2011/09/16/hackers-get-hired-at-blet_n_966246.html) 2011-09-26 at the Wayback Machine, *HuffPost Tech UK*, September 19, 2011
8. "Mobile App Hackathon - TechVenture 2011" (https://web.archive.org/web/20111221093855/http://www.techventure2 011.com/hackathon) *archive.org*. 21 December 2011. Archived from the original (http://www.techventure2011.com/h ackathon) on 21 December 2011 Retrieved 16 March 2018.

9. "Music Hack Day homepage" (http://musichackday.org/). Musichackday.org. Retrieved 2013-10-09.

10. "Music Hackathon at Music Tech Fest in Boston" (http://www.bbc.com/news/technology-27067106). BBC.com. Retrieved 2015-03-05.

11. "Science Hack Day homepage" (http://sciencehackday.org/). Sciencehackday.org. Retrieved 2014-12-09.

12. "Android Hackathon" (http://androidhackathon.org/) Android Hackathon. 2010-03-13 Retrieved 2013-10-09.

13. "iOSDevCamp 2011 Hackathon" (http://www.iosdevcamp.org/contest/) Iosdevcamp.org. Retrieved 2013-10-09.

14. "N9 Hackathon" (https://metalab.at/wiki/N9_Hackathon) (in German). Metalab.at Retrieved 2013-10-09.

15. "Nordeus 2011 Game Development Hackathon" (https://web.archive.org/web/20131029001801/http://seehub.me/2011/11/nordeus-2011-game-development-hackathon/) Seehub.me. Archived from the original (http://seehub.me/2011/11/nordeus-2011-game-development-hackathon/) on 2013-10-29. Retrieved 2013-10-09.

16. "TV Hackfest homepage" (http://www.hackfest.tv/). Hackfest.tv. Retrieved 2013-10-09.

17. "Article on TV Hackfest San Francisco" (http://www.techzone360.com/topics/techzone/articles/2012/12/19/320277-tv-hackfest-brings-hackathon-2013-apps-world-event.htm) Techzone360.com. 2012-12-19 Retrieved 2013-10-09.

18. "PDF of Feature article on TV Hackfest in AIB The Channel" (https://web.archive.org/web/20140226044303/http://www.hackfest.tv/thechannel-TV-Hackfest.pdf) (PDF). Archived from the original (http://www.hackfest.tv/thechannel-TV-Hackfest.pdf) (PDF) on 2014-02-26. Retrieved 2013-10-09.

19. "OBF Hackathons" (http://www.open-bio.org/wiki/Hackathon) Open-bio.org. 2013-03-12 Retrieved 2013-10-09.

20. "NESCent-sponsored Hackathons" (http://informatics.nescent.org/wiki/Main_Page#Hackathons) Informatics.nescent.org Retrieved 2013-10-09.

21. T Hill (2007-12-14). "Hilmar Lapp, Sendu Bala, James P. Balhoff, Amy Bouck, Naohisa Goto, Mark Holder, Richard Holland, et al. 2007. "The 2006 NESCent Phyloinformatics Hackathon: A Field Report." Evolutionary Bioinformatics Online 3: 287–296" (http://www.la-press.com/the-2006-nescent-phyloinformatics-hackathon-a-field-report-article-a480). La-press.com. Retrieved 2013-10-09.

22. "biohackathon.org" (http://www.biohackathon.org/). biohackathon.org. Retrieved 2013-10-09.

23. "hackathon.neurosynth.org" (https://web.archive.org/web/20131202224713/http://hackathon.neurosynth.org/) hackathon.neurosynth.org. Archived from the original (http://hackathon.neurosynth.org/) on 2013-12-02. Retrieved 2013-10-09.

24. "2012 Allen Brain Atlas Hackathon - Hackathon - Allen Brain Atlas User Community" (http://community.brain-map.org/display/hackathon/2012+Allen+Brain+Atlas+Hackathon) Community.brain-map.org. 2012-09-04 Retrieved 2013-10-09.

25. "Brainhack.org" (http://www.brainhack.org/). Brainhack.org. Retrieved 2013-10-09.

26. "HBM Hackathon - Organization for Human Brain Mapping" (http://humanbrainmapping.org/hackathon) Humanbrainmapping.org Retrieved 2013-10-09.

27. DownCityJS, the Providence JavaScript Hackathon (http://downcityjs.com/) Archived (https://web.archive.org/web/20140325175133/http://downcityjs.com/) 2014-03-25 at the Wayback Machine.

28. Knockout, Node. "Node Knockout" (http://www.nodeknockout.com) *www.nodeknockout.com* Retrieved 16 March 2018.

29. HTML5 App Hackathon (https://hackathon.5apps.com/) Archived (https://web.archive.org/web/20140325173454/https://hackathon.5apps.com/) 2014-03-25 at the Wayback Machine, May 5–6, 2012, Berlin, Germany

30. "Pune Rails Hackathon: July 29-30, 2006" (http://punehackathon.pbworks.com/w/page/19872985/FrontPage) Punehackathon.pbworks.com Retrieved 2013-10-09.

31. Open! Hack! Day! (http://code.flickr.com/blog/2008/09/03/open-hack-day/), Flickr blog, September 3, 2008

32. Purple in Bangalore – Inside Yahoo! Open Hack India 2012 (http://developer.yahoo.com/blogs/ydn/purple-bangalore-inside-yahoo-open-hack-india-2012-52837.html) Archived (https://web.archive.org/web/20131021180616/http://developer.yahoo.com/blogs/ydn/purple-bangalore-inside-yahoo-open-hack-india-2012-52837.html) 2013-10-21 at the Wayback Machine, Pushpalee Johnson, August 11, 2012, YDN Blog

33. "Google Hackathon • Vivacity 2015" (https://web.archive.org/web/20150126012015/http://vivacity.lnmiit.ac.in/hackathon.html). Vivacity. 2014-12-25. Archived from the original (http://vivacity.lnmiit.ac.in/hackathon.html) on 2015-01-26. Retrieved 2015-01-10.

34. "Melbourne Hack Day: List Of Presentations And Winners" (https://web.archive.org/web/20110422202934/http://lplabs.com/melbournehack/pmwiki/pmwiki.php/Main/ListOfPresentationsAndWinners) Archived from the original (http://lplabs.com/melbournehack/pmwiki/pmwiki.php/Main/ListOfPresentationsAndWinners) on 2011-04-22.

35. The hackathon heard round the world! (http://blog.foursquare.com/2011/09/20/the-hackathon-heard-round-the-world/) Archived (https://web.archive.org/web/20120301135347/http://blog.foursquare.com/2011/09/20/the-hackathon-heard-round-the-world/) 2012-03-01 at the Wayback Machine, Foursquare blog, September 20, 2011

36. If you build it, they will come. Check out all the cool new things you can do with Foursquare! #hackathon (http://blog.foursquare.com/2013/01/08/if-you-build-it-they-will-come-check-out-all-the-cool-new-things-you-can-do-with-foursquare-hackathon/) Archived (https://web.archive.org/web/20130429155637/http://blog.foursquare.com/2013/01/08/if-you-build-it-they-will-come-check-out-all-the-cool-new-things-you-can-do-with-foursquare-hackathon/) 2013-04-29 at the Wayback Machine, Foursquare blog, January 8, 2013

37. "IETF Hackathon" (https://www.ietf.org/hackathon/). www.ietf.org. Retrieved 2017-12-18.

38. Open government hackathons matter (http://govfresh.com/2011/08/open-government-hackathons-matter/) Mark Headd, govfresh, August 24, 2011

39. In #HackWeTrust - The House of Representatives Opens Its Doors to Transparency Through Technology (http://sunlightfoundation.com/blog/2011/12/08/in-hackwetrust-the-house-of-representatives-opens-its-doors-to-transparency-through-technology/), Daniel Schuman, Sunlight Foundation blog, December 8, 2011

40. Toronto dementia hackathon 12-14 September (http://blogs.fco.gov.uk/nicolearbour/2014/08/08/toronto-dementia-hackathon-12-14-september/) Dr. John Preece, British Foreign & Commonwealth Office Blogs, August 8, 2014

41. Toronto hackathon to target dementia challenges with innovative ideas (https://www.gov.uk/government/world-location-news/toronto-hackathon-to-target-dementia-challenges-with-innovative-ideas) British High Commission Ottawa, GOV.UK, July 25, 2014

42. HackerNest hooks up with British Consulate-General Toronto for new DementiaHack (http://www.betakit.com/hackernest-hooks-up-with-british-consulate-general-toronto-for-new-dementiahack/) Joseph Czikk, Betakit, August 12, 2014

43. "DementiaHack - HackerNest" (http://hackernest.com/dementiahack) Retrieved 2015-09-03.

44. "About the Global Game Jam" (http://globalgamejam.org/about) GlobalGameJam. Retrieved 19 April 2016.

45. "Global Game Jam Diversifiers" (http://globalgamejam.org/global-game-jam-diversifiers) GlobalGameJam. Retrieved 19 April 2016.

46. All aboard the transit hackathon express (http://www.montrealgazette.com/technology/aboard+transit+hackathon+express/5869790/story.html) Archived (https://web.archive.org/web/20120108050332/http://www.montrealgazette.com/technology/aboard+transit+hackathon+express/5869790/story.html) 2012-01-08 at the Wayback Machine, Roberto Rocha, The Gazette, December 16, 2011

47. "Hackney Hackathon succeeds in new services" (https://www.publictechnology.net/articles/news/hack-ney-thon-provides-new-apps-council) Retrieved 17 July 2015.

48. "Education Hack Day" (http://educationhackday.org/). Education Hack Day. Retrieved 2013-10-09.

49. Council, Field Studies. "Page Not Found - FSC" (http://www.field-studies-council.org/news/fieldwork-hackday-a-real-success.aspx). www.field-studies-council.org. Retrieved 16 March 2018.

50. "fschackday.org" (http://fschackday.org/). fschackday.org. Retrieved 2013-10-09.

51. NASA, Microsoft, Google Hosting Hackathon (https://archive.is/20130126113758/http://www.informationweek.com/news/government/enterprise-apps/225402115) Elizabeth Montalbano, InformationWeek, June 7, 2010

52. "THE Port" (http://theport.ch/). theport.ch. Retrieved 2017-12-13.

53. Rocheleau, Matt. "In Aaron Swartz' memory, hackathons to be held across globe, including at MIT next month" (http://www.boston.com/yourcampus/news/mit/2013/10/in_aaron_swartz_memory_hackathons_to_be_held_across_globe_including_at_mit_next_month.html) Boston Globe. Retrieved 17 October 2013.

54. Doctorow, Cory. "Aaron Swartz hackathon" (http://boingboing.net/2013/10/17/aaron-swartz-hackathon.html) Boing Boing. Retrieved 17 October 2013.

55. Sifry, Micah L. "techPresident" (http://techpresident.com/news/24422/first-post-greased) Personal Democracy Media. Retrieved 11 October 2013.

56. "Aaron Swartz Hackathon" (https://web.archive.org/web/20140329125421/http://aaronswartzhackathon.org/) Archived from the original (http://aaronswartzhackathon.org/) on 29 March 2014. Retrieved 30 October 2013.

57. Female Geeks Flex Their Skills At Ladies-Only Hackathon (http://www.fastcompany.com/magazine/159/female-hackathon), Jed Lipinski, Fast Company, September 14, 2011

58. World's largest student hackathon descends on Wells Fargo Center (http://www.bizjournals.com/philadelphia/news/2015/09/03/student-hackathon-wells-fargo-penn-apps-upenn.html) Philadelphia Business Journal

59. Student computer whizzes compete at PennApps Hackathon (http://articles.philly.com/2015-09-07/news/66271516_1_computer-penn-state-students-rowan-university) Philly.com

60. "Code Wars" (https://uomcc.wordpress.com/2017/09/13/code-wars/) *University Of Mauritius Computer Club* 2017-09-13. Retrieved 2017-10-20.

61. "UoM CodeWars 2017 - Real life code implementations ! - Codarren" (https://codarren.com/2017/09/uom-codewars-2017-fun-code/). *Codarren*. 2017-09-26. Retrieved 2017-10-20.

62. Goetz, Nicole (1 September 2017). "ShamHacks: Missouri S&T hackathon" (https://hackathon.mst.edu/) *ShamHacks*. Retrieved 4 April 2018.

63. Sheeley, Andrew (15 February 2018). "ShamHacks' first hackathon benefits veterans and students" (http://www.phelpscountyfocus.com/the_focus_insider/article_5bdc168a-10c8-11e8-9919-27f757762b62.html) *Phelps County Focus*. Retrieved 5 April 2018.

64. "Stay focused and keep hacking" (https://www.facebook.com/notes/facebook-engineering/stay-focused-and-keep-hacking/10150842676418920) *www.facebook.com*. Retrieved 16 March 2018.

65. "Local Talent Drives Startup Culture In Tampa Bay" (http://www.83degreesmedia.com/features/startup080613.aspx) *83Degrees*. Retrieved 2017-08-15.

66. A.Sigfridsson, G. Avram, A. Sheehan and D.K. Sullivan "Sprint-driven development: working, learning and the process of enculturation in the PyPy community" (https://ulir.ul.ie/bitstream/handle/10344/1903/2007_Sigfredsson.pdf?sequence=2) in the Proceedings of the Third International Conference on Open Source Systems, Limerick, Ireland June 11-13 2007, Springer, pp. 133-146

67. c2.com Python Sprint entry

68. "Welcome to the First European Perl Hackathon" (http://conferences.yapceurope.org/hack2007nl/) Conferences.yapceurope.org. 2007-03-04 Retrieved 2013-10-09.

69. "Perl Toolchain Summit 2018" (http://www.qa-hackathon.org/) *www.qa-hackathon.org*. Retrieved 16 March 2018.

70. "Hac: The Haskell Hackathon" (http://www.haskell.org/haskellwiki/Hackathon). Haskell.org. 2013-06-30 Retrieved 2013-10-09.

71. "The International Scala Hackathon" (https://web.archive.org/web/20110408073244/http://scalathon.org/) Scalathon. Archived from the original (http://scalathon.org/) on 2011-04-08. Retrieved 2013-10-09.

72. B. Düring, "Sprint Driven Development: Agile Methodologies in a Distributed Open Source Project (PyPy)" (https://link.springer.com/chapter/10.1007/11774129_2) in *Extreme Programming and Agile Processes in Software Engineering*, P. Abrahamsson, M. Marchesi, and G. Succi, Eds. Springer Berlin Heidelberg, 2006, pp. 191–195.

73. "LibreOffice Events" (https://wiki.documentfoundation.org/Events) The Document Foundation. 2014-07-11 Retrieved 2014-07-11.

74. "Drupal NYC Hackathon" (http://groups.drupal.org/node/24568) Groups.drupal.org. 2009-08-16 Retrieved 2013-10-09.

75. "MediaWiki Events" (https://www.mediawiki.org/wiki/Events) Mediawiki.org. Retrieved 2013-10-09.

76. "Meet 'Titstare,' the Tech World's Latest 'Joke' from the Minds of Brogrammers" (http://www.thewire.com/technology/2013/09/titstare-tech-worlds-latest-brogrammer-joke-techcrunch-disrupt/69171/) *The Wire*. Retrieved 2015-11-09.

77. "An Apology From" (https://techcrunch.com/2013/09/08/an-apology-from-techcrunch/) *TechCrunch*. Retrieved 2015-11-09.

78. Mike Swift. "When Jokes go too Far" (http://news.mlh.io/when-jokes-go-too-far-09-19-2015) *Major League Hacking* Retrieved 2016-06-06.

79. Victor Vucicevich. "Leaving Hack the North" (https://medium.com/@vicvu/leaving-htn-ec62e0343c91) *Medium*. Retrieved 2016-06-06.

External links

- "Media-Making Strategies to Support Community and Learning at Hackathons" MIT Center for Civic Media. June 30, 2014.