# OpenTech SUMMIT

|  | Tuesday, October 1 | | | Wednesday, October 2 | | |
|---|---|---|---|---|---|---|
|  | Morning | Afternoon | Evening | Morning | Afternoon | Evening |
| Event Space (Floor 10) | Registration + Exhibition + Coffee | | | Registration + Exhibition + Coffee | | |
| Auditorium (Floor 7) | Open Tech | | | | | |
| X1AB (Floor 10) | | Artificial Intelligence | | Cloud, Container, DevOps | Open Tech | |
| X4B (Floor 10) | | Open Source Education | | Open Hardware and Production | | |
| X11.7 (Floor 11) | | Databases and MySQL | | Internet Universality | | |
| Bangkok City | | | Social Dinner Event | | | Night Market Visit |

## OpenTechSummit Thailand 2019 - Oct.1, Day 1

### Conference Opening Day 1 / Track Open Tech

| | | |
|---|---|---|
| 9:00 | Pachara Naripthaphan | Welcome (MC) |
| 9:05 | Mishari Muqbil, Lead FOSSASIA Thailand | Connecting OpenTech with Thailand |
| 9:20 | Pun-arj Chairatana, Director NIA | How NIA foster Technology Startups and the Open Source Community |
| 9:35 | Misako Ito (Japan) Senior Advisor UNESCO | The importance of FOSS for sustainable development |
| 9:45 | Mario Behling (Germany), Founder FOSSASIA | Next comes Open Tech |
| 10:00 | Marco A. Gutierrez (Spain) | Pocket Science Lab and Robotics for Education |
| 10:10 | KW Teng (Singapore) | Laser Cutter for STEM |
| 10:30 | | Coffee Break |
| 10:50 | Dr. Putchong Uthayopas | Lesson learned from the building of a terascale AI server infrastructure — Building an AI service Infrastructure for a large number of researchers is a challenging task due to the complexity of system architecture, hardware and software co-design which need to match the diverse requirement of advanced users. This talk will share some lesson learned from setting up the ARES ( AI Research and Education System) and Poseidon System at Kasetsart University. ARES system is a cluster of NVIDIA V100 GPU consists of 4 nodes servers connecting to a 100Gbps infrastructure. Poseidon is a DGX1 system consists of 8 V100GPU card that has a peak deep learning performance of 1 petaflop. The purpose of this system is to accelerate the deep learning and HPC research activities at Kasetsart University. The lesson learned from system design implementation will be present along with the challenges and solution used for both software and hardware. Currently, this system is up and running for a group of advanced users and will soon publicly open for services at Kasetsart University. |
| 11:05 | Klaikong Vaidhyakarn | Open Government and eCitizen Engagement |
| 11:30 | Surprise Speaker | Open Tech in the Industry |
| 11:55 | Tanat Tonguthaisri | Preparing for the Autonomous Vehicle Era — Autonomous vehicle (AV), a.k.a. robotic car, self-driving car, or driverless car has the capability of sensing its environment and moving with little or no human input, the AV is set to revolutionize the way humans travel. The benefits are countless, ranging from reducing road accidents, emissions, drunk driving, and assisting elderlies and the disabled. However, there are also risks and issues that need to be addressed. Questions of how it will be regulated and how it will be liable for accidents or criminal actions still remain unanswered. The government sector continues its attempts to answer these questions through various forms of testing in regulatory sandboxes and use cases. There are dozens of cities around the globe already hosting AV trials, including Singapore's Land Transit Authority (LTA)'s sandbox, as well as Chiba and Semboku cities in Japan. Join in the discussion on making AVs a reality. |
| 12:15 | Ryan Kuan, Ivan Ma | News from MySQL |
| 12:20 | Mario Behling, Mishari Muqbil | What's happening at OpenTechSummit Thailand |
| 12:30 | | Exhibition Visit (Floor 10) |
| 13:00 | | Lunch Break (Floor 9, Cafeteria) |

## Day 1 / Track Artifical Intelligence in Room X1AB (Floor 10)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 14:00 | Boonsak Watanavisit | Blend In : How I sneaked FOSS into CGI Visual Effects Industry | Digital content creation software selections for visual effects was always dominated by a few organizations: Adobe, Autodesk for example. Nowaday, every one of them has adopted the subscription based business model, so users have no other options but to keep paying rental fee for continuous usage of their software.I was aware of the situation so I began my search for alternatives many years ago. Granted, it was a bumpy ride, but it's worth it in the end. Now I do not rely on the so called 'mainstream' software to produce industry standard work thanks to the FOSS community. And I'd like to share my story with you. |
| 14:30 | Surprise Speaker | | |
| 15:00 | Surprise Speaker | | |
| 15:30 | | Coffee Break | |
| 16:00 | Rushil Sharma; Rutvik Kshirsagar | Kubernetes with Machine Learning using KUBEFLOW | |
| 16:30 | Chathu Vishwajith | Properly Securing NodeJS APIs | The way we write APIs is changing. SPA frameworks like Angular are shifting the paradigm of API consumption and to be effective developers we have to keep up. We often dedicate a lot of time in crafting powerful APIs that interact with many different clients, but overlook proper security measures that can come back to haunt us.In this talk, we'll look at the proper way to secure our API's with JSON Web Tokens. We'll go from learning what JSON Web Tokens are, why they're the driving force in API security, and to put theory into practice actually build a real-world implementation using Node.js/TypeScript where we'll show common best practices. |
| 17:15 | | End of Track | |

## Day 1 / Track Open Source Education in Room X4B (Floor 10)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 14:00 | Joompot Sriyapan | การสอน coding เด็ก ด้วย opensource software | ประสบการณ์การสอน coding ผ่าน opensource software โดยใช้ระบบ mentor-based ซึ่งผู้เรียนจะเป็นผู้ค้นคว้าและศึกษาเนื้อหาด้วยตนเอง โดยมี mentor เป็นผู้แนะนำหัวข้อหรือแหล่งเรียนรู้ และช่วยให้ผู้เรียนพัฒนากระบวนการเรียนรู้ด้วยตนเองได้ |
| 14:30 | Korakot Chaovavanich | Google Colaboratory for Open Data | Google Colaboratory (or shortly Colab) is a free cloud platform to run Jupyter Notebooks. It is freely provided for research and educational purpose. A data scientist can create an analysis notebook where anyone on the internet can click and tinker with it. So, it is a very useful tool to promote open data and citizen data science. In this talk I will present the key features of Colab and demo some example notebooks. |
| 15:00 | Marco A. Gutiérrez | Python Introduction: Master all the Basics | Begin a career as a programmer by attending this comprehensive and straightforward Python introductory workshop. This bootcamp will equip you with the right skills for your future employers. |
| 15:30 | | Coffee Break | |
| 16:00 | Marco A. Gutiérrez | Python Introduction: Write Your First App | This bootcamp will equip you with the right skills which lets you become more employable and valuable in the eyes of future employers. You will learn how to write a Python app. |
| 16:30 | Unnop Sricharoenchai | HomeschoolNetwork.org and OctoberCMS | Talking about my open source project name homeschoolnetwork.org. Also, talking about the web framework behind the project name OctoberCMS. The newbie CMS with Laravel Framework. October CMS voted the Best Flat File CMS in 2018. อธิบายความเป็นมาและความสามารถของ open source project ชื่อ homeschoolnetwork.org ชวนพูดคุยถึงเบื้องหลังการทำงานของเว็บด้วย OctoberCMS ซึ่งเป็น CMS น้องใหม่ ที่เพิ่งได้รับการโหวต Best Flat File CMS ปี 2018 |
| 17:00 | Rizky Ariestiyansyah | Building Smart Connected Ecosystem using Open Source Mozilla WebThings | I will demonstrate Open Source Mozilla'ss WebThings Gateway, an IoT framework to protect user privacy and security, and to improve cross-brand interoperability. I Will show how to build your own web things using WebThings Framework which is collection of reusable component that directly expose Web Thing API. Developers will have capabilities to monitor and control their ecosystem like house, farm, office from anywhere over the web, also able to understand how to create rules engine and floor plan in Mozilla WebThings Gateway to make great architecture of smart ecosystem. Participants will be showed study case of WebThings live on stage. |
| 17:30 | | End of Track | |

## Day 1 / Track Databases and MySQL in Room X11.7 (Floor 11)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 14:00 | Ryan Kuan | MySQL Overview for Oracle DBAs | MySQL is the most popular open source database used and trusted by millions of users for cloud, internet and mobile applications. More and more enterprises are evaluating open source database technology as alternatives to their existing Oracle database. In this session, we will help existing Oracle DBAs to understand MySQL better as a viable database platform to complement existing Oracle database. |
| 14:30 | Ivan Ma | The Secret of MySQL InnoDB Cluster Deployment | Deploying MySQL as Open Source Database with the #1 High Availability focus is critical to many applications today.　The session is to go after the latest MySQL InnoDB Cluster solution - To automate the Provision in Cloning; To automate the Failover using MySQL Router; To automate the Data Recovery; To simply the "Cluster" creation using MySQL Shell; Come and Join us the session to explore the details with MySQL InnoDB Cluster |
| 15:30 | | Coffee Break | |
| 16:00 | Ryan Kuan | Unleasing the power of NoSQL using MySQL 8.0 | JavaScript Object Notation (JSON) is fast becoming the de-facto data exchange format for both modern web and mobile application development framework. Developers love the flexibility of JSON to allow them to modify data structure anyway they want without bothering their DBA. In this session, come discover the latest NoSQL capabilities in MySQL to store and manage JSON data seamlessly in MySQL as well as to integrate with existing structured data in MySQL. |
| 16:30 | Ivan Ma | MySQL Troubleshooting and Performance Analysis | MySQL powers many of the world's largest and fastest-growing organizations. In this session, you will get more practical, safe and efficient ways to know in-and-out of the MySQL database performance; gain tips and tricks. Some OPEN SOURCE tools such as http://dimitrik.free.fr/ and Performance Schema will be explored during the session. Join us to find MySQL bottlenecks and learn how to properly configure the database appropriately for your efficient MySQL database. |
| 17:15 | | End of Track | |

## Day 2 / Track Cloud, Containter, DevOps in Room X1AB (Floor 10)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 9:00 | Rushil Sharma; Rutvik Kshirsagar | Openshift 4 the hybrid cloud market disruptor | Openshift 4 is the latest Enterprise Kubernetes solution unlike any other in the market. This session will include hands on demonstration of OPENSHIFT 4.1 on RED HAT ENTERPRISE LINUX COREOS, RED HAT ENTERPRISE LINUX 8.0. |
| 9:30 | Ploy Chanprasert | Personal Data Monitoring Tool in Southeast Asia: Opportunities for Data and Privacy Protection in the Overlooked Region | The session has an objective to explore possibilities of having a personal data monitoring tool is free, easy to use, and open source for general public in Southeast Asia where efforts on cybersecurity and personal data and privacy protection are still limited. Many data breach incidents have not been handled properly looking at it from human rights perspectives. There are times that affected individuals are told to changed their passwords only without knowing where their personal data goes compared to those in the first world countries where personal data monitoring service is offered. The tool, if there is a possibility to develop, would help protect people in data breach incidents in Southeast Asia. The session aims to discuss the possibility to develop this tool from technical perspectives. |
| 10:00 | Santosh Viswanatham | Writing Javascript with Better Performance | We have been writing Javascript for almost two decades now and it is showing up everywhere, including mobile apps, Servers, Devices, and Robots. But, Did you ever thought about the performance of your Javascript? or if there is still a better way to write JS which is faster? In this session, I will talk about the lessons I learned after cleaning up a 5-year-old code-base, proper ways to write your Javascript code, How handling typecasting, shortening scope chains, function chaining will improve the performance, How the usual way we do operations is not the fastest way to do it. I will also talk about How writing unnecessary steps can be expensive, and using supersets like Typescript can improve your code quality and performance. I will compare the performance of different approaches, and introduce tips and tools to validate the performance. |
| 10:30 | | Coffee Break | |
| 11:00 | Prathan Thananart | Towards Container Platforms and Serverless Solutions | Docker and Kubernetes have ushered in an era of container Platform as a Service solutions. This talk compares homegrown cluster deployments against various offerings from cloud providers including ECS, EKS, GKE, and GCR. |
| 11:30 | Somsak Sriprayoonsakul | How open-source software help ByteArk scale 5 times to achieve almost a million concurrents. | ByteArk is a CDN platform providing services video streaming &amp; web-site. The platform has passed a certain milestone that the platform could withstand almost a million concurrent viewers in a single event by scaling the platform 5 times of its former capacity in around 2 months. This presentation will share the details on how open-source software help achieve this milestone. |
| 12:00 | Andrew Lee 李健秋 | An infrastructure on containers to build your own Debian based distro | It is impressive how much time and resources a team can save by using the OBS infrastructure to manages their packages creation and distribution. OBS is a generic system to build and distribute packages from sources in an automatic, consistent and reproducible way.This presentation will help existing and new software projects and independent software vendors better understand how to use morden infrastructure to maintain your packages and repositories for multiple distributions and architectures collaboratively. And will hopefully encourage more software projects and independent software vendors to use such infrastructure to provide repositories for user to keep track their updates easily, and for developers to collaboratively work and contribute easily to the packages and repositories. |
| 12:30 | | Lunch Break (Floor 9, Cafeteria) | |

## Day 2 / Track Open Tech in Room X1AB (Floor 10)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 14:00 | Jinal Foflia | Driving South East Asia Forward with OpenStreetMap | It's been more than a year since we at Grab incorporated OpenStreetMap into our ecosystem and we have come a long way since then. This talk will focus on our learning journey, our tools, the challenges and our experiences working in the South East Asia region and the vibrant OpenStreetMap communities here. |
| 14:30 | Alliya Moun-ob | OpenStreetMap for TreeMapping | WWF's Living Planet Report 2018 revealed that wildlife populations have dropped on average by 60% within the past 50 years. We think of a few rare and iconic species being at risk of extinction, but the report shows that the whole natural world is feeling the impact of human activity.The same report sets out a vision for worldwide action to 'bend the curve' and reverse this decline in wildlife populations by 2030.We can all play a role in monitoring the health of our local environment. Without knowing what wildlife inhabits an area we have no way of knowing the impact changes to the environment might have on biodiversity. Wildlife might be declining because of things we are doing - or not doing - and we could have no idea that this was happening until the entire ecosystem was irreparably damaged. Learning About our local biodiversity empowers us with the knowledge we need to make informed decisions about how to protect and restore the natural world around us.Trees survey and mapping will help children to seek and learn about their biodiversity and how it supports wildlife in urban area. Moreover, the tree height and diameter can tell us how much carbon it contains and contributes to climate change. All data they have learnt will inspire them to value their neighbor green area and protect it. |
| 15:00 | Supawat Pugkhem | Blockchain implementation for government sectors for its partners in healthcare system | In healthcare system, the government sectors need information exchanges among its parties such as manufacturers, distributors, hospitals and pharmacies. By using blockchain platform, all parties will exchange their information via blockchain platform automatically. This implementation helps to automate the information exchange processes from partner's Enterprise Resource Planning system (ERP system) to government's ERP system via blockchain Therefore, by using this solution, there will be no offline information sending nor receiving among them. This solution will help to make sure that the results of the information exchange are faster, more accurate, more reliable and more transparent as well as reducing the cost of process to put the information offline and online.The implementation takes care of all the security aspects, a proper Public Key Infrastructure (PKI) is used throughout the system including encryptions to secure the communication and verify the identity via digital signature. All information is prepared from ERP automatically in agreed XML format, then is signed, encrypted and sent to blockchain platform via SOAP/RESTFUL API. At the other end, the information is received, then unencrypted, identified and then sent to ERP system automatically.The result of this implementation via using blockchain is very successful with partners and this will become the standard of communication between the government and its parties in healthcare in this coming year. |
| 15:30 | | Coffee Break | |
| 16:00 | Shane Torr | Tech Skills: Who's hiring and how much are they paying | Wondering how much your tech skills are worth? This session will give a brief context to the tech skills market (particularly in Thailand) to help explain what's driving demand and which Open Source skills are being sought. Then the session will then cover in more detail what affects salaries, what level of salaries are being paid for which skills, and how to "get found" if you're looking. |
| 17:00 | Mishari Muqbil, Mario Behling | Event Closing | This was OpenTechSummit Thailand 2019 |
| 16:55 | | End of Track | |

## Day 2 / Track Open Hardware and Production in Room X4B (Floor 10)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 9:00 | Nontawit Markjan | Transfarmer: Open source makes agriculture do more | Transfarmer is the smart hydroponics farm project that integrated technologies with the agriculture follows by the industrial standard ANSI/ISA95. It consists of 3 main parts which are 1. hardware - planting and harvesting system, fertilizer control, and environmental monitoring 2. server - the medium that connect hardware and application to work together and 3. application/dashboard - users can real-time monitor the status and control their farm to plant or harvest at anywhere in the world. |
| 9:45 | Nguyen Hong Quan | Application of open tech in an IoT platform for agriculture | The major advantage of an IoT platform for farming is the integration into a one platform to control farming decisions such as irrigation system control, fertilization, pesticides, and an open data network. |
| 10:30 | | Coffee Break | |
| 11:00 | Cristian Guajardo | Building a wax printer for the fabrication of chemical analysis devices | In the last decades, chemical analysis has been moving from the laboratory to hand-held devices, of which the glucose meter (for diabetes pacients) and pregnancy test are two successful examples. Paper-based microfluidics is a new technology that holds the promise of removing expensive and cumbersome instrumentation from chemical analysis devices, while still performing sophisticated medical and agricultural diagnostics. These devices are commonly fabricated using paper containing fluid channels made out of wax, which conduct the liquid sample during the analysis. In this talk, we tell our experience of adopting free and open source technology to modify an existing design of wax printer, and to use it as an student project for our laboratory. |
| 11:30 | Wei Tat Chung | Pocket Science Lab | Pocket Science Lab is a complete platform that is fully open source in every layer; hardware and software. Looks may deceive you thinking it's another Arduino device but you would be amazed to see what it can do. This tiny device can literally replace a room full of electronic analytical tools with its 4 channel oscilloscope, logic analyzer, multi-meter, wave generator and many more instruments it got. With a PSLab in hand, you wouldn't need to know any software programming to use and take readings from almost any sensor you got. PSLab got it all. In this session I am going to show you all of it. |
| 12:30 | | Lunch Break (Floor 9, Cafeteria) | |
| 14:30 | Nat Weerawan | Chiang Mai Maker Club: An open source community & maker space in CNX | Nat will be talking about the ups and downs of community-building; curation of tech content, connecting people, building teams out of volunteers from scratch, and the challenges of making the concept of 'makers' more known to society. Moreover, the talk will also touch upon how conventional education faces a challenge to build capabilities that correspond to fast-moving technological advances — mainly why building learning communities like Maker spaces is crucial. |
| 15:00 | Kee Wee Deng | CraftLaser - the open source laser cutter | The CraftLaser is the first Full-metal enclosure CO2 laser cutter that provides maximum protection to you and your family, much like owning a Blu-ray Player, it is a Class 1 Laser equipment. The CraftLaser is lightweight and has a luggable design that makes it the only CO2 laser cutter that is stowable and perfect for users with limited space. Also, you do not need to plug in an extra air extractor (also means you don't need to be close to a window or door to vent the extracted air) and you also do not need to plug in an external cooling system to use it. No ugly water pipings and pails of water to deal with. |
| 15:30 | | Coffee Break | |
| 16:00 | Andrew Tse | Mass production of hardware and getting it into the hands of your customer | You've spent months on the prototype, rehashing, redesigning, testing and breaking and now you have a product you are happy is market-ready. The hard work is not yet over. How do you then take the step of getting it mass manufactured, packaged and delivered to a fulfilment warehouse or direct to your customers?The making of a multiple products at scale is not the same as fabricating the prototype. The components may be the same, but the process is not. So what could have worked wonderfully for the prototype may fail disastrously for the finished product. Some companies are under such pressure to fulfil orders or hit production deadlines that they rush this step and what they thought was just a replication of the working prototype instead becomes a mad dash with invariably quality issues. Often it's because the developer has spent too long perfecting the product or software, and they impatiently just want to see their baby on the shelves, but insufficient time is left for the actual factory production. I'd like to talk through some of the pitfalls of production, quality control and then packaging and logistics to get the final product to market. I hope that some of the lessons will make your life easier in developing and finishing your products and giving your customer the best experience possible. |
| 16:30 | Khomdet Phueadphut | KBIDE: Opensource & Hackable IDE for hardware developers. | KBIDE is a tool for embedded board development [types esp32 and arduino-avr]. Its coolest feature allows beginners to learn programming using blocks without having to worry about complicated syntax. Moreover, more elaborate users can also choose to code with C/CPP Language to unlock its full potential. Other key features include efficient compulation, ease of plug-in use, and customizable IDE. But what is the logic behind building this user-friendly tool? All its workings is backed with Electron and VueJS, a Compiler coded by NodeJS, developed as a WebApp - all-in-all which makes it an ease for all users. Not to mention that this amazing tool is 100% Open-source. |
| 16:55 | | End of Track | |

## Day 2 / Track Internet Universality in Room X11.7 (Floor 11)

| Time | Speaker | Title | Description |
|---|---|---|---|
| 9:00 - 17:00 | Misako Ito | Internet Universality in Thailand | The Internet Universality ROAM-X indicators framework is relevant to all countries to gain a holistic diagnosis of Internet policies, digital environments and structural causes of digital inequalities. |