

About Arvin Technologies

Raspberry pi – for Education, Research and Development

Kavaja Thejas Student Engineer

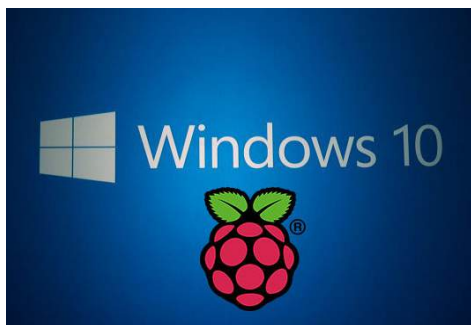
Samsung Announces Artik Platform To Accelerate Internet Of Things Development

COVER STORY

## Extending the reach of IoT: Windows 10 comes to Raspberry Pi 2

### Windows on Raspberry Pi

Over the years, the Raspberry Pi has helped children learn to code and has powered many homebrew projects around the world, but some users have often lamented at the lack Windows support. Luckily, now that the Raspberry Pi 2 is here, that's all about to change. Microsoft has announced that it will support the Raspberry Pi Foundation's latest board, making a specialized version of its Windows 10 operating system available to the wider Pi community for free via its Windows Developer Program for IoT (Internet of Things).



Windows 10, the new version of Microsoft's omnipresent operating system, is expected to launch this summer, and is designed to work across mobile and desktop. But more than that, it's being pitched at tab-

lets, Xbox, hybrids, and the fast-emerging Internet of Things (IoT).

In other words, Microsoft is looking to ensure its famous software remains relevant in the fast-moving, multi-platform age of ubiquitous computing.

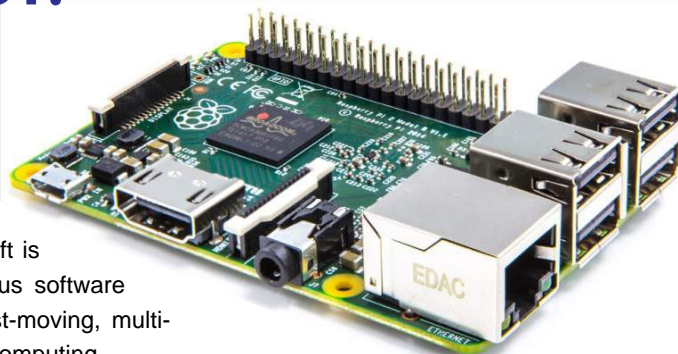
Raspberry Pi has come a long way since the device launched out of the U.K. in 2012. It was designed as an easy entry point for young programmers, as well as an affordable means of "hacking" cool new technologies in emerging markets.

The new \$35 Raspberry Pi device announced today will have six times the processing power of the original and twice the amount of main memory — so it's emerging as a more powerful, capable machine that can do almost all the things a normal PC can, such as word processing and web surfing, among other things.

So far, Raspberry Pi has supported a handful of operating systems, including Linux, but now thanks to its upgraded ARMv7 processor, it can support Windows too. And this massively widens the appeal of the credit card-sized contraption.

### Open for business

Microsoft has been adopting a more



open approach in recent times, and recently revealed it was to open-source its .NET software framework and release it on GitHub, with plans to target Mac OS X and Linux.

With this latest move, Microsoft is continuing with that "open" mindset by targeting the creative communities, more specifically those working in the IoT realm.

Microsoft said that Windows 10 will be completely free for its so-called "Maker" community through its Windows Developer Program for IoT, an initiative that started rolling out in July 2014. By making the upcoming Windows available for absolutely nothing, it's going some way towards not only ensuring Windows remains relevant, but also that hackers, tinkerers, and creatives are able to work with a system that's familiar to millions.

The Raspberry Pi 2 is available now, with Windows 10 to follow in the coming months.

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# ABOUT ARVIN TECHNOLOGIES

Arvin Technologies is a professionally managed company incorporated in the year 2012 to provide technology enabled services and training for small, medium and large size businesses. Arvin Technologies has diversified services in the field of Electronic R&D, Product Development, Industrial Automation, Software Development and Corporate Training. With a state-of-the-art infrastructure and a team of highly-skilled professionals, we render world-class services to our clients.

The research wing of this organization caters to design and prototyping of Embedded Technology Products customized as per requirements of the customers. We take pride to be a pioneer organization offering extensive training on Embedded system development and integrated platform application development using Embedded technologies and software.

It may not be out of place to mention here that the quality of research and its output is not by accident it is always the result of high intention, sincere effort and skillful execution. We strive to deliver excellence in whatever we do, and to do it right the first time and do it right every time.

## AT – EMBEDDED R&D

The embedded R&D division is a highly advanced technology oriented service provider in embedded software and hardware solutions to institutions and industries. We develop complete solution in the field of Home automations, Consumer Electronics, Robotics, Multimedia, Security, Automobiles, Telecommunication, and Data Communication etc. Our projects familiarize with different software IDEs like Keil, MPLAB, IAR Embedded Tools, AVR studio, and different hardware platforms like AVR, PIC, TEXAS MSP, RENESAS etc. Our team of engineers has rich experience in distributing micro controllers through internet DSP technologies, FPGA designer development, advanced project development using Cypress PSOC micro controllers etc.

## AT - AUTOMATION

At Arvin Technologies we provide specialized technical consulting services and custom engineered products to the whole process industries applying advanced methods and technologies. The multi-disciplinary nature of the solutions to projects in the industrial environments demands expertise in a wide range of fields. Our team of dedicated engineers, programmers and technicians possess highly specialized skills in a broad range of fields. Our production spectrum includes both components and systems, which assist the technicians fulfilling their task and the operators in optimizing the operation running. We have representatives and agencies at many important locations worldwide, ensuring quick competent service in the field.

## AT - SOFTWARE SYSTEMS

At Arvin Technologies, we strive to deliver well-rounded and capable IT professionals from our institute. We take pride in our network of centers spread across the country. Imparting high end career choices to thousands of students, we not only coach our students, but also counsel them to find out their best interest. AT – Software Systems students have proved its success by landing jobs in leading names of IT industry in India and abroad.

## AT – TECHNOLOGY ENABLED CORPORATE TRAINING

Our training division provides comprehensive learning environment to individuals and enterprises, offering customized packages suiting their needs and objectives. We provide personalized guidance to M.Tech, B.Tech, and other Degree / Diploma students for their academic projects. Unlike other project guidance providers, we make the students get extensively involved in their projects by exposing them to real-life practical situations and guide them in overcoming all their technical difficulties. Our faculties closely interact with the students and support them in their career advancement.



# FOR EDUCATION, RESEARCH AND DEVELOPMENT

Raspberry Pi was created as an educational tool. Concerned with the decline in computer science graduates, four programmers from the University of Cambridge's Computer Laboratory wanted to create an affordable computer for students to learn the basics of coding. In 2008, they founded the U.K.-based Raspberry Pi foundation, a registered educational charity with the mission "to advance the education of adults and children, particularly in the field of computers, computer science and related subjects."

Three years later, they released the Raspberry Pi, a green board the size of an index card with various ports like USBs and HDMI. It looks like a very small computer took off its protective plastic shell.

Since the first version went on sale in 2012, the budget computer has gained popularity, as expected, among hobbyists, enthusiasts, and aspiring hackers. The Raspberry Pi foundation has sold 3 million altogether. But it has also attracted hardware startups, and Raspberry Pi has taken note of the new trend. The foundation noticed an uptick in bulk orders from industrial companies looking to use Raspberry Pi to make products, and this fall will release a version specifically for hardware makers.



The compute module is a slimmed down version of the Pi. The theory is that the new form factor will attract even more hardware

startups not to just prototype with Pi, but mass-produce products with Pi inside.

The newest addition to the Pi family nixes the ports, which are useful to someone connecting their Pi up to a monitor or TV, but not necessary for a smart sprinkler, for example. Anyone who wants a USB port can build it into the product where it makes sense. Without the extraneous add-ons, the new Pi is thin, like a credit card. It will retail for "around \$30" in batches of 100.

## Raspberry pi 2, six times faster than p1.

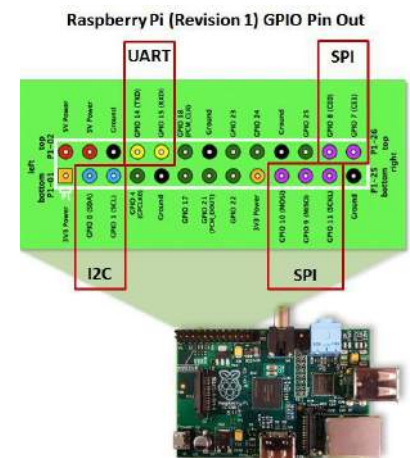
A faster Raspberry Pi 2 computer is now shipping without a rise in price, and for the first time it will support Microsoft's Windows 10 OS for the development of smart devices and appliances.

At \$35, the new computer has managed to retain the low-cost appeal of the original Raspberry Pi, which has sold more than 4 million units. Raspberry Pi 2 is also six times faster than the original computer.

The Raspberry Pi 2 has a faster CPU and more memory than its predecessor, which could make it a true PC replacement.

The faster performance will also bring new applications like computer vision to robots, smart devices, drones and other electronics. For example, the extra horsepower will allow the Pi 2 to comprehend images from attached 3D cameras, which was not possible on Pi 1.

Users will be able to use Raspberry Pi 2 to develop Windows-based smart devices, robots and appliances. Microsoft is looking to expand in the Internet of Things market and offers development boards like Intel's Galileo and Galileo 2 as part of its Windows on Devices program. Raspberry Pi 2 may become part of that program.



## IoT - Internet of Things

The Internet of Things (IoT) refers to the ever-growing network of physical objects that feature an IP address for internet connectivity, and the communication that occurs between these objects and other Internet-enabled devices and systems.

The Internet of Things extends internet connectivity beyond traditional devices like desktop and laptop computers, smartphones and tablets to a diverse range of devices and everyday things that utilize embedded technology to communicate and interact with the external environment, all via the Internet.

Examples of objects that can fall into the scope of Internet of Things include connected security systems, thermostats, cars, electronic appliances, lights in household and commercial environments, alarm clocks, speaker systems, vending machines and more.

As far as the reach of the Internet of Things, there are more than 12 billion devices that can currently connect to the Internet, and researchers at IDC estimate that by 2020 there will be 26 times more connected things than people.

# Which one is better to build a drone, a microcontroller like Arduino, a microcomputer like Raspberry Pi or another one?

You definitely need a microcontroller, one of the ways that a microcontroller is different from a computer system like the Raspberry Pi is things like latency and timing. The Raspberry Pi runs Linux, which like most multitasking OSs has task polling/switching (IRQ0) every 10ms. The practical implication of this is that if at some point the Raspberry Pi needs to do something other than fly the quadcopter (like service OS-level tasks), your flight control code is going to "black out" for at least 10ms. (Though it's true that you can tweak the kernel to reduce the task poll time).

Normally this is fine since the quadcopter mechanical response time is slower than 10ms, BUT this is going to screw with your AHRS



loops if you don't buffer the IMU data, and your PID loops if you don't compensate for it.

In simple terms - the Raspberry Pi is running an OS, which is doing a bunch of OS-like things in the background, like flushing buffers, and system logs, and stuff like that. These things happen periodically, and will interrupt your code. With normal software, you don't

notice this interruption because it's happening at a timescale much lower than a human can tell. However, with a quadcopter, there are processes that shouldn't be interrupted (like the part that collects IMU data). You don't have much control over this interruption (because a multi-tasking OS is designed like this), and so the only way to use a Raspberry Pi to fly a quadcopter is to build hardware buffers into the IMU module, and write code to compensate for non-updating PID output (if you don't you can destabilise the craft because your gains would be wrong).

On the other hand, microcontrollers either run an RTOS, or some low-level interrupt-driven code that guarantees low-latency operation on the critical parts of the code. If you need the processing power of the Raspberry Pi, what you should do is have a microcontroller deal with low-level and low-latency tasks such as interfacing with an IMU, and running the PID and output loops. Then slave the microcontroller to the Raspberry Pi, and leave the high-level navigation and communications code to the Raspberry Pi.

In the past, that's what we've done. A cheap microcontroller deals with IMU, PID, and manual flight controls, and runs a rudimentary quaternion-based AHRS with simple filtering for stabilisation; then, a lightweight 1GHz quad core ARM computer running Linux deals with GPS autopilot and communications, as well as a more powerful AHRS with EKF. The microcontroller's AHRS is fast but less accurate and drifts over time, while the computer's AHRS is slow (higher latency) but more accurate. So we combine the best of both worlds by having the microcontroller control the quadcopter, and the ARM computer periodically send it AHRS corrections to keep it trimmed and accurate.

***"Learn from yesterday, live for today, hope for tomorrow.  
The important thing is not to stop questioning"***

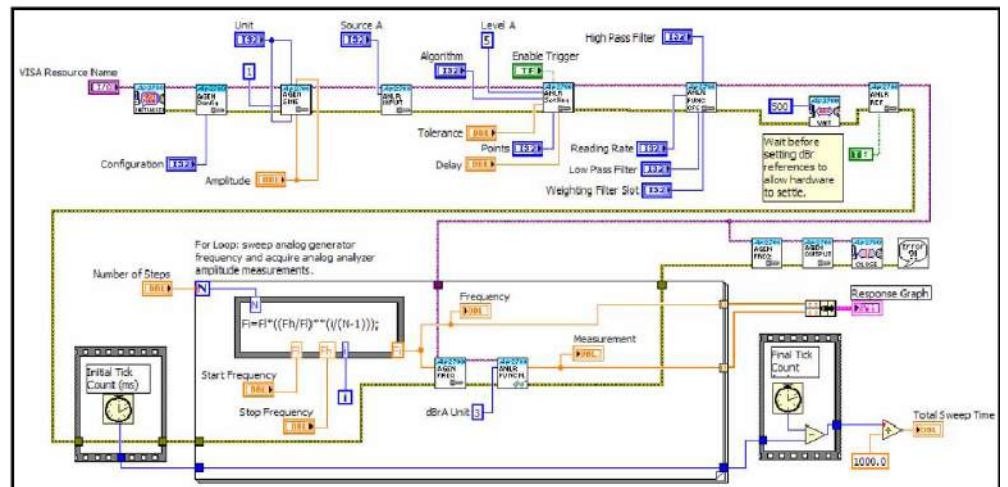
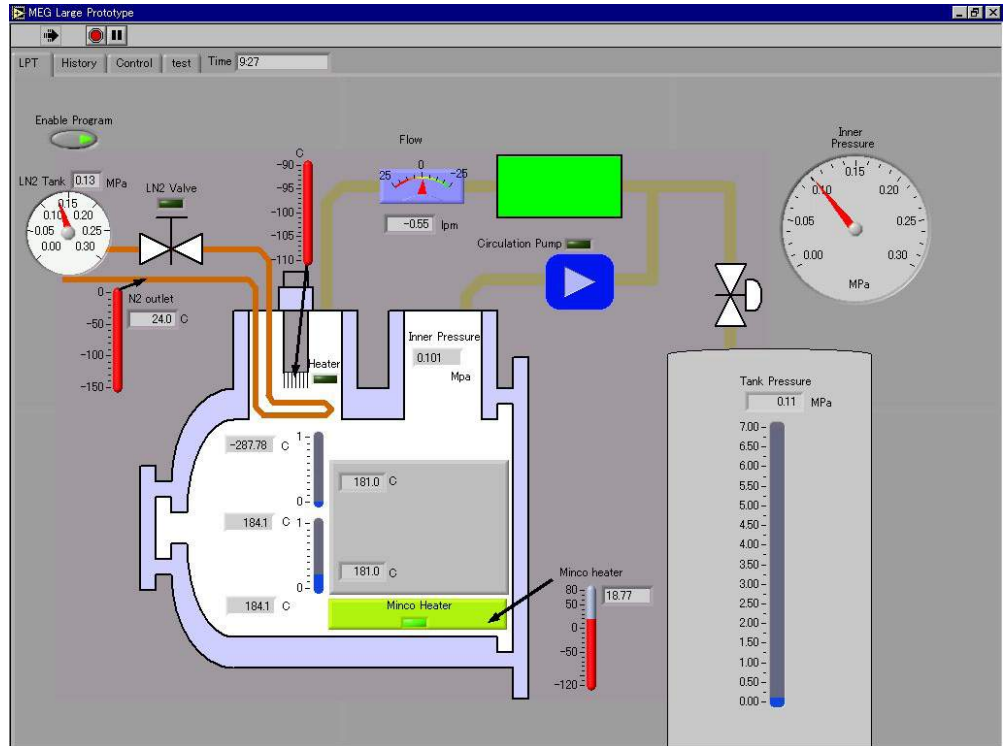
*- Albert Einstein*

# LABVIEW- MODERN ERA OF TECHNOLOGY SIMULATION

LabVIEW - Laboratory Virtual Instrument Engineering Workbench - is a graphical programming language that contains comprehensive set of tools for acquiring, analyzing, displaying and storing data. You can create your own applications by using these various tools that are used to monitor and control various processes. Applications created in LabVIEW environment are known as Virtual Instruments or simply Vis. These Vis will reduce coding and troubleshooting issues of all textual programming languages such as C, C++, JAVA, Dot NET etc.

In LabVIEW you can build a user interface by the help of Front Panel (FP). After you build the Front Panel (FP), you can add codes by using Vis and structures to control your Front Panel (FP). The Block Diagram (BD) contains these codes. You can use Labview applications to communicate with hardware such as data acquisition, vision and motion control devices as well as GPIB, PXI, VXI, RS 232 and RS 485 instruments.

By the help of LabVIEW you can realize an efficient and fastest automation platform that can be applied from small scale to large scale industries in order to control multiple processes. As a LabVIEW professional you will get an industrial exposure to collect maximum salary recipe. It is sure that in the upcoming years the entire commercial automated systems will be focused on LabVIEW platform. The thing to prior notice is that, LabVIEW is more economical and more technology integrated platform for you to excel your career as a budding engineer.



## Industrial Training

Arvin Technologies providing Industrial training for Engineering and Diploma students from ECE, EEE and AE&I backgrounds in core field and CS and IT in Software Development area. All students will get benefit from our Engineers in Real Time Industrial aspects. It will Help the students in their final year placements too.

### Place:

Arvin Technologies Manufacturing Unit,  
Kalamassery, Ernakulam,  
Kerala.

### Duration:

Customized as per student requirements.

### For more details Contact:

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Student Name : **Ms. Remya Radhakrishnan**  
 Dept & Semester : ECE 8th SEM  
 College : Believers Church Caarmel Engineering College, Pathanamthitta  
 Project Name : Kavaja Thejas



A detailed project report on revolutionary project initiative of budding engineering student Ms. Remya Radhakrishnan, S8 B-Tech ECE student of Believers Church Caarmel Engineering College, Pathanamthitta, enabling user friendly consumer-supplier interaction in power distribution and detection of line breaks, was submitted to Honourable Minister of Labour & Skills Sri. Shibu Baby John on 19th Feb 2015 in the college. The abstract report for the project for KSEB was submitted to Honourable Chief Minister of State Sri. Oommen Chandy at Secretariat, Thiruvananthapuram on 29-10-2014 in the presence of Honourable Minister for Power Sri. Aryadan Mohammed; Sri Anto Antony, MP of Pathanamthitta & Sri Raju Abraham MLA of Ranni.



## What is KAVAJA THEJAS?

KAVAJA THEJAS is an Automatic Meter Reading (AMR) System using Power Line Carrier Communication (PLCC). The consumption of electric power is measured using energy meter installed at home. The existing meters are either an electronic energy meter or an electro-mechanical meter. The reading of the energy meter is taken by meter readers every month by reaching the homes physically. Then the amount payable by the consumer is calculated. Researchers proposed many systems for Automatic Meter Reading (AMR). There are various wire-based AMR systems like telephone network, optical/ cable or wireless AMR systems such as E-metering systems based on GPRS, Bluetooth and GSM. This project examines the realization of a technique to communicate the meter reading to the computer system in the electrical section office that can calculate the cost of energy and send the electricity bill to the consumer premises via power line communication. This method can also report the power failure and line faults electronically.



**For academic project assistance  
and free guidance visit**

[www.atmosap.com/projectforum](http://www.atmosap.com/projectforum).

Live chat and online webinars are available  
to support students to realize their brilliant ideas.



**Arvin Technologies  
Student Engineer Awards –  
Details will be  
announced soon.**

***“Somewhere, something incredible is waiting to be known”***

*– Carl Sagan*

Students Name : Asish Mathew Johnson  
 Ashitha V  
 Aparna Joseph  
 Anuja Jacob  
 Dept & Semester : ECE 3rd Year 201-2016  
 College : Mangalam College of Engineering  
 Project Name : S2Govern



## What is S2Govern?

The system S2Govern is designed to regulate speed with in areas of speed regulation is needed. The implementation of the system eliminates the need of speed breakers or any such obstacles. Nowadays the number of accidents that occur on roads are increasing day by day. The reason for this mainly recklessness over speeding and ignorance to traffic sign boards. The bestway to solve this problem is control the machine's potential. An engine can accelerate above 100km/hr. except for a few exceptions. The system S2Govern is designed to limit the speed below a limit in areas where required such as School Zones, Hospital Zones, Accident Prone Areas, etc. This can be further developed into a security system for an Automobile. Link the system with the mobile phone of the owner and he can track the vehicle and also stop the vehicle at his will. The system works with the help of RF ID based on AVR microcontroller; ATMEGA 32. The RF ID will be installed along with sign boards both at the stating of a Zone and at its end. While an FR Reader is installed on the vehicle. When the vehicle enters the zone the RF Reader reads the code of the ID and establishes Speed Limit. Then, when the vehicle moves out of the zone, the system reads the second code at the end of a Zone and the system drops the Speed Limit. In the case where limit is to be established, any speed below the permitted speed can be attainable.

For the practical application of the system the amount of fuel can be controlled and thus the speed either through the limiting the control signal of the fuel injector or by controlling the functioning of an actual Speed Governor. Since in the latest vehicles the electronic control is present the implementation of this system is very easy. An additional advantage of the system is that, it has the provision for development and improvement. Such as switching of control after a time, for example in school zones no control is required after 6:30 pm and before 7:00 am. It can have addons so that it can be develop into a security system.

## Innovativeness and Usefulness

Every year thousands or more people die in car crashes, road accidents among which about 90% of them are due to carelessness, recklessness and ignorance to traffic sign and rules. The System S2Govern is an innovative move towards solving the problem in a smarter way. To

regulate the speed of a vehicle throughout the time of running is a waste of time and fuel. If regulation is only implemented in areas required this problem can be solved. The use of GPRS location for governing is a suggested idea for some time now. But the RF ID system used in S2Govern is more easily implemented and more reliable. The RF ID code can be designed to be codes. These when decoded will give the speed limit in that zone and the system can limit the speed to the required. The coding of RF ID code to the speed required can simplify the system design and programming. The safety being the first rule in on the road the system ensures safety to maximum of human limits.

## ATMoSAP

Arvin Technologies Modular Skill Acquisition Programme

Almost every manufacturing company is adopting industrial standards to survive in highly competitive market. So all these companies required trained engineers for design and manufacturing process, mean high requirement of trained Engineers all over the globe.

Arvin Technologies has designed the training program AT-MoSAP which fulfill the requirements of the company in the core fields. We provide the practical and professional training on latest hardware and software which fulfill the need of candidate or professionals.

ATMoSAP has number of training program as per candidate requirements. Our training program includes Embedded Systems, Industrial Automation, MATLAB & VLSI, LAB-VIEW, Software Programs etc.

For more details visit :

[www.atmosap.com](http://www.atmosap.com)

[www.arvintechnologies.in](http://www.arvintechnologies.in)

[fb.com/arvintechnologies](https://fb.com/arvintechnologies)

***“Research is to see what everybody else has seen, and to think what nobody else has thought”-***

*Albert Szent-Gyorgyi  
 (Biochemist)*

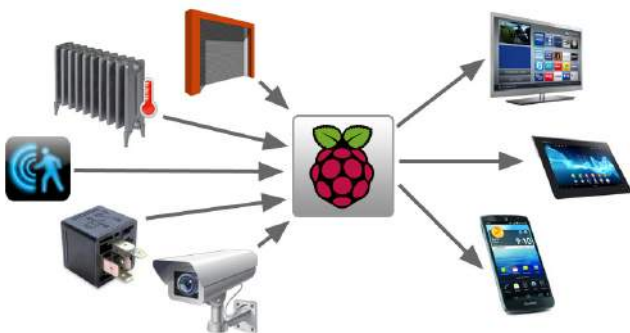
## RASPERRY PI:

## 7 INCREDIBLE PROJECTS PEOPLE ARE MAKING WITH RASPERRY PI

**1. Computer:** One of the most basic but significant uses for Raspberry Pi is to power a computer. It doesn't take much, and there are several ways you can do it. All you really need is an old monitor, a keyboard and a short list of materials, including an HDMI to VGA converter, USB cables and a few other items. Michael Davis provides an excellent step-by-step guide to building an all-in-one computer running Raspberry Pi, but other experts have created ways to build more portable, albeit more complicated, Raspberry Pi computers.



**2. Home automation:** There are a number of expensive solutions that allow you to remotely control the lights within your house, but Raspberry Pi is a much cheaper and more customizable solution. With a few simple tools, users can hook up their Internet-connected Raspberry Pi boards to their house's power loads to control the lights via a mobile device. Instructables has a great guide on how to automate your home with Raspberry Pi.



**3. Jukebox:** Why play music from a simple stereo when you can make your own jukebox to be controlled by you and your friends? Software engineer Shaun Gehring created a cool way to turn his Raspberry Pi into an Airplay receiver; by hooking up an LCD screen, a Wi-Fi adapter and a few buttons and resistors, he and his friends

could control Pandora, playing music, skipping stations and controlling the volume.



**4. Animated picture frame:** You'll never get tired of your wall art when you have your own ever-changing gallery -- in one frame. Cameron Wiebe came up with a great way to hook up his Raspberry Pi to an LCD sitting behind a fancy picture frame, pulling artwork from website DeviantArt and cycling through random images throughout the day.

**5. Air-quality device:** PA Consulting Group held a Raspberry Pi-making competition in March, asking groups of young programmers to show off their unique designs after three months of work. The winners from the 16-18 age group showed off a unique air-quality and weather-surveillance device, which could take the data collected by its air-quality sensors and upload it directly on the Internet, where information about the environment's temperature, humidity and contents could be viewed on a smartphone or tablet. The device could also measure levels of nitrogen dioxide and carbon monoxide.

**6. Automated pill dispenser:** Another award winner from PA Consulting Group's Raspberry Pi Awards in March was actually built by a team of 12- to 16-year-olds, who created an automated pill dispenser for elderly or forgetful patients. By hooking up a Raspberry Pi to a pill dispenser, doctors can remotely manage the administration of drugs through their own protected websites. If the patient doesn't take his or her dosage at the appropriate time, an alert automatically goes out to a family member or neighbor (set up in advance) to check on the patient.

**7. BeetBox:** NYU master's candidate Scott Garner created one of the quirkiest but most entertaining uses for Raspberry Pi: to make musical fruits -- well, root vegetables, actually. His original idea was to create a "simple instrument that allows users to play drum beats by touching actual beets," so he built a full musical apparatus out of a wooden shelf to hold the Raspberry Pi, a capacitive touch sensor from SparkFun, a salvaged speaker and six beets.

For more details and explanations visit : <http://arvintechnologies.in/thebyte>.

# TESLA – 2015

## Technology Upgradation & Skill Development Programme for Laboratory Instructors.

The Department of Electronics and Communication Engineering, Mangalam College of Engineering, Ettumanoor in association with Arvin Technologies organized 3 days workshop TESLA -2015 for laboratory instructors. The program was designed to train lab instructors in the area of Embedded Systems and Raspberry Pi.



# SAMSUNG ANNOUNCES ARTIK PLATFORM TO ACCELERATE INTERNET OF THINGS DEVELOPMENT



Samsung Electronics announced the Samsung ARTIK™ platform to allow faster, simpler development of new enterprise, industrial and consumer applications for the Internet of Things (IoT). ARTIK is an open platform that includes a best-in-class family of integrated production-ready modules, advanced software, development boards, drivers, tools, security features and cloud connectivity designed to help accelerate development of a new generation of better, smarter IoT devices, solutions and services.

“We are providing the industry’s most advanced, open and secure platform for developing IoT products”, said Young Sohn, president and chief strategy officer, Samsung Electronics. “By leveraging Samsung’s high-volume manufacturing, advanced silicon process and packaging technologies, and extensive ecosystem, ARTIK allows developers to rapidly turn great ideas into market leading IoT products and applications.”

## The ARTIK Family

All members of the Samsung ARTIK family incorporate unique embedded hardware security technology, on-board memory and advanced processing power in an open platform. Security is also a key element of the advanced software integrated into the module along with the ability to connect to the Internet for cloud-based data analytics and enhanced services. As an open platform, Samsung ARTIK can be easily customized for more rapid deployment of IoT devices and the services that can be delivered using them.

Samsung ARTIK platform comes in a variety of configurations to meet the specific requirements of a wide range of devices from wearables and home automation, to smart lighting and industrial applications. Initial members of the ARTIK family include:



### • ARTIK 1

the smallest IoT module currently available in the industry at 12mm-by-12mm combines Bluetooth/BLE connectivity and a nine-axis sensor with best-in-class compute capabilities and power consumption. It is specifically designed for low-power, small form-factor IoT applications.

### • ARTIK 5

delivers an outstanding balance of size, power and price-performance and is ideal for home hubs, drones and high-end wearables. It incorporates a 1GHz dual-core processor and on-board DRAM and flash memory.

### • ARTIK 10

delivers advanced capabilities and high-performance to IoT with an eight-core processor, full 1080p video decoding/encoding, 5.1 audio and 2GB DRAM along with 16GB flash memory. The Samsung ARTIK 10 includes Wi-Fi, Bluetooth/BLE and ZigBee connectivity and is designed for use with home servers, media applications, and in industrial settings.

“Industry requirements for IoT devices vary in terms of battery life, computational horse power and form factor,” said Sohn. “With this family of ARTIK offerings, Samsung is directly addressing the needs of the widest range of customers, uses and applications.”

# DEVELOPING EMPLOYABILITY IN INDIA.....

## The Job Skills Employers are Looking For

Employers are often looking for skills that go beyond qualifications and experience.

While your education and experience may make you eligible to apply for a job, to be successful in the role you will need to exhibit a mix of skills: 'employability skills'. This means that the specialist, technical skills associated with different roles may be less important than the 'soft skills' that can be transferred between different jobs and different employment sectors.

For employers, getting the right people means identifying people with the right skills and qualities to fulfill the role and contribute to the organization's success. Candidates may have the qualifications and 'hard skills' needed to be able to manage the job role but, without a well-honed set of 'soft skills', employers are less inclined to hire.

## What are Employability Skills?

Employability skills are those skills necessary for getting, keeping and being successful in a job.

They are the skills and attitudes that enable employees to get along with their colleagues, to make critical decisions, solve problems, develop respect and ultimately become strong ambassadors for the organization.

Employability or 'soft skills' are the foundation of your career building blocks and they are frequently referenced in the media as lacking in school-leavers, graduates and those already in employment. Organizations spend a lot of time and money training staff, not in job specific areas but in general and basic skills.

**In times of high unemployment, employers have more choice of applicants and will favor those with well-rounded employability skills.**

## Interpersonal Skills

Interpersonal skills are vital when seeking employment and may be the single most important factor for many recruiters.

Interpersonal skills are the skills we use to interact with other people. Good interpersonal skills allow you to participate effectively as a member of a team, satisfy customers and clients' expectations, negotiate, make decisions, manage your time efficiently, take responsibility, and work effectively with other employees. Well-honed interpersonal skills allow us to empathise and build rapport with colleagues and clients, leading to a better working environment which can be less stressful.

## Communication Skills

Employers look for people who communicate well both verbally and in writing.

If you are either applying for a job or looking for a promotion with your current employer, you will need to demonstrate good communication skills. The ability to communicate both verbally and in writing with a wide variety of people, maintain good eye contact, write clearly and succinctly, demonstrate a varied vocabulary and tailor your language to your audience are all essential skills that employers seek out. Good verbal and written communication means you can get your messages across with less chance of misunderstanding.

## Critical Thinking Skills

The ability to solve problems and make decisions can be a huge asset to your employer and these are therefore desirable skills to develop.

Decision making and problem solving require gathering reliable information, evaluating the information for a variety of solutions and selecting the most appropriate option based on the criteria and situation. Although the ability to solve problems and make appropriate decisions are critical in any job, people with these skills are especially helpful in customer service positions.

The ability to be able to effectively plan and organize means that you, or your team, are more likely to get the job done correctly the first time. These skills are beneficial to employers as they save time and money. Planning and organization also require the recording of information (maybe in a report) which can be referred to when planning future projects.

## Presentation Skills

Presenting information clearly and effectively is a key skill in the work place and presentation skills are required in almost every modern employment area.

Whether you are an administrator, manager or executive, you should expect to present your ideas and findings to your work colleagues and external stakeholders. Presenting information does not just include making formal presentations - information could be presented in the form of notes, reports, research findings, business plans, scenario planning, risk assessments and strategic documents. You may well be asked to give a presentation as part of your initial interview.

## Leadership

Leadership is the ability to influence others toward the achievement of a goal.

Leaders either have, or are perceived to have, strong self-confidence. Leaders are team players, allowing them to work in a group to achieve the best results for their employer. Leaders show social skills by respecting the thoughts, opinions and ideas of others - they gain the respect of others and aim for credibility.

The latest QS recruitment survey (2010) lists the four most important skills sought by executive level recruiters as interpersonal skills, communication skills, strategic thinking and leadership ability. Developing your leadership skills can therefore not only help you to find a senior position, but may also help you to gain promotion with your current employer.

## IT Skills

Most people need some IT skills to find work today. Acquiring basic IT skills and being familiar with using a computer may open up a wide range of employment opportunities and increase your marketability in the workplace.

It is likely that a modern job will require you to be familiar with at least some computer applications. Computer literacy means understanding what computers can and cannot do. Even if you know that you will not be using a computer in your job, it is well worth your while learning some of the basics of information technology, for example how to send and receive emails, use the internet effectively, and use word processor and spreadsheet software.

# My Project Selfie Contest



Post 'selfie with your Project' to our  
facebook page with brief project description

[www.facebook.com/arvintechnologies](http://www.facebook.com/arvintechnologies)



*Embedded,  
Robotics  
Mechatronics,  
Automation  
Instrumentation*

My Project Selfie Contest is organized by 'The Byte' - Technical news letter of Arvin Technologies.

The main objective of this project competition- which will be conducted annually for engineering students, is to promote innovative ventures undertaken by students in the field of engineering. It aims to provide them with a platform to showcase their project work done as a part of the curriculum, to a larger part of the society including industry professionals. This event will also enable them to interact with other innovative minds and get access to latest developments in engineering. It is hoped that these will help to boost their confidence to scale greater heights in their career as an engineer.



[www.arvintechnologies.in](http://www.arvintechnologies.in)

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The contest is for projects that can be exhibited as working models.

Students of professional colleges in the state including engineering, polytechnic and arts and science colleges can participate

Based on the the short project description provided by teams and the interaction with them by an expert committee 10-15 teams would be selected for project expo. The expert committee would select the winners after an exhibition

What you should do

Post Selfie with your project to our facebook page - [fb.com/arvintechnologies](https://fb.com/arvintechnologies).

01. The project you propose to present:
02. Name, address and telephone number of the educational institution:
03. A description of the project not exceeding one page:
04. Financial estimate of the project:

## ATMoSAP

[www.atmosap.com](http://www.atmosap.com)

**Post your selfies before :  
31-01-2016**

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