

# Aswin Babu Karuvally

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INTRODUCTION	Free Software enthusiast, developer and trainer, deeply passionate about Network Programming, Operating Systems and IoT. Currently working as CAD Engineer at XILINX	
EDUCATION	<b>College of Engineering Trivandrum</b> , Kerala, India	
	<ul style="list-style-type: none"><li>Master of Computer Applications</li><li>CGPA: 7.7 / 10</li></ul>	Aug 2016 – Jun 2019
	<b>Naipunnya School of Management</b> , Kerala, India	
	<ul style="list-style-type: none"><li>BSc. Computer Science</li><li>CGPA: 7.9 / 10</li></ul>	Jun 2013 – May 2016
LINKS	<ul style="list-style-type: none"><li><b>Github:</b> <a href="https://github.com/karuvally">https://github.com/karuvally</a></li><li><b>LinkedIn:</b> <a href="https://linkedin.com/in/karuvally">https://linkedin.com/in/karuvally</a></li><li><b>Blog:</b> <a href="https://karuvally.github.io">https://karuvally.github.io</a></li></ul>	
EXPERIENCE	<b>CAD Engineer, XILINX</b> , Hyderabad, India	Jul 2019 – Present
	<ul style="list-style-type: none"><li>Development and updation of tools, automated systems</li><li>Management and debugging of Revision Control System (ICM GDP)</li><li>Provide infrastructure support</li></ul>	
	<b>CAD Engineer Intern, XILINX</b> , Hyderabad, India	Feb 2019 – Jul 2019
	<ul style="list-style-type: none"><li>Developed, updated automation scripts</li><li>Managed Revision Control System (ICM GDP)</li><li>Supported users on infrastructure issues</li></ul>	
	<b>Consultant, DAMAC Solutions</b> , Trivandrum, India	Aug 2018 – Nov 2018
	<ul style="list-style-type: none"><li>Tasked with evaluating and deploying cloud backup solution</li></ul>	
	<b>Developer, Project Lifeboat</b> , Kerala, India	Aug 2018 – Sep 2018
	<ul style="list-style-type: none"><li>Developed scripts for removing duplicates from distress call data</li><li>Helped deploying servers, coordinated dev team</li></ul>	
	<b>Developer and Admin, KnowledgeBase @ CET</b> , Trivandrum, Kerala, India	Jan 2018 – Nov 2018
	<ul style="list-style-type: none"><li>Deployed easy to use web file manager for storing academic resources</li><li>Tasked with maintaining and administering the system</li></ul>	
	<b>Trainer, FestFlick</b> , Trivandrum, Kerala, India	Sep 2017 – Nov 2018
	<ul style="list-style-type: none"><li>Served as resource person for IoT, Python and Linux, Git and Image Processing workshops</li></ul>	
	<b>Student Faculty, IoT Lab, CET</b> , Trivandrum, Kerala, India	Aug 2017 – Nov 2018
	<ul style="list-style-type: none"><li>Tasked with conducting workshops on Linux, Python and IoT devices such as Raspberry Pi</li></ul>	
	<b>Homepage maintainer, Free Software Users Group</b> , Trivandrum, Kerala, India	Jul 2017 – Jan 2018
	<ul style="list-style-type: none"><li>maintained <a href="http://tvm.fsug.in">http://tvm.fsug.in</a></li></ul>	
	<b>Developer and Admin, Dextro Systems</b> , Alleppey, Kerala, India	Dec 2015 – Jan 2017
	<ul style="list-style-type: none"><li>Developer web applications using Python and Bottle</li><li>Deployed and managed projects on PaaS (OpenShift) instances</li></ul>	
PROGRAMMING	<ul style="list-style-type: none"><li><b>Python 2 and 3</b><ul style="list-style-type: none"><li>Extensively used Python for network programming, system scripting, automation, web development, IoT, image processing, machine learning and web scraping</li></ul></li></ul>	

- **Shell Scripting**
  - Used BASH as primary language before switching to Python. Developed tools to automate everyday problems such as script for automatically reconnecting dropped dialup connection
- **C/C++**
  - Used C to convert previously written scripts in Python to increase performance and decrease memory footprint
- **PHP**
  - Developed a number of web applications that used PHP to generate dynamic content.
- **HTML5 and CSS3**
  - Developed a number of web frontends for web applications and for static websites.
- **L<sup>A</sup>T<sub>E</sub>X and Beamer**
  - Used L<sup>A</sup>T<sub>E</sub>X as primary typesetting tool and also for developing slideshows.
- **SQL**
  - Used SQL for storing and retrieveing data from webapps.

## TOOLS AND TECHNOLOGIES

- **Linux**
  - Using Linux as the primary Operating System since 2005.
  - Extensively tweaked the OS to match personal and client needs
  - Deployed and maintained Linux Systems including web, file and backup servers
  - Trained students on Linux basics, shell and managing IoT devices running Linux
- **Version Control**
  - Experienced with Git and Gitflow, Perforce Helix Core, ICMange GDP
  - Served as resource person for Git workshops
- **Internet of Things**
  - Experienced with Raspberry Pi and Arduino
  - Used Raspberry Pi for several projects including surveillance
  - Trained students on IoT both inside and outside CET
- **Virtualization**
  - Experienced with KVM, VirtualBox, Hyper-V, VMWare and Docker
  - Extensively used virtual machines for testing and deploying projects
- **Image Processing**
  - Implemented a number of projects in OpenCV including one to differentiate book copies
  - Trained students in Image Processing and OpenCV
- **Numpy and Pandas**
  - Used Numpy for variety of Image Processing and Machine Learning Projects
  - Used Pandas for dealing with really large datasets
- **scikit-learn**
  - Developed demand and car price prediction system
- **Web Scraping**
  - Experienced with Selenium, Scrapy and BeautifulSoup
  - Developed scraping script for Servntire using Selenium
- **Mongo DB**
  - Developed an experimental web app for handling data from large number of distress calls
- **Cloud Computing**
  - Deployed a number of projects onto OpenShift and Digital Ocean
  - Used Google Cloud for processing large datasets for ML project
- **pdb**
  - Used pdb for extensively debugging Python applications
- **Bottle**

- Uses bottle as the primary framework for web development

- **NMap**

- Used NMap for monitoring and finding faults with network

## PUBLICATIONS

### CONFERENCES

- [1] Aswin Babu Karuvally, Basith Hameem, Ann Jerin Sundar and John Prakash Joseph “Enhancing Performance and Reliability of Network File System,” in *Proceedings of the International Conference for Control Communication and Computing 2018*, Trivandrum India, Jul 2018.

## PROJECTS

- **Deploy It** - simple to use deployer for Python apps 2019
- **NetDog** - dead simple configuration management 2018
- **Scrapy Project** - scrap server info from Hurricane BGP toolkit 2018
- **Lightup** - replacement for Intel’s xbacklight utility 2017
- **Buzzer** - Zero cost alternative for quiz buzzers 2017
- **Bak** - Fast, time-stamped archival or present working directory 2016
- **SaveMyCode** - Automated archival of directories upon file change 2015
- **Weather-Get** - Command line application to quickly retrieve and display weather 2014
- **Duplex** - Easy double sided printing on normal printers 2012
- **Modem Reset** - Auto reset and reconnect dialup connection upon failure 2011

## INTERESTS

GNU/Linux • Operating Systems • Network Programming • UNIX Philosophy • Shell  
Internet of Things • Vintage Computing • Virtualization • High Performance Computing

## HOBBIES

Driving • Reading • Collecting vintage computers • Blogging

## VOLUNTEERING

- Debutsav 2018, CUSAT, Kochi, Kerala
- Hasgeek Fifth Elephant 2018, Bangalore
- Hasgeek Anthill 2018, Bangalore
- Raspberry Jam Trivandrum 2018, Trivandrum
- Debian Stretch Release Party and Install Fest 2017, Cherthala
- Debian Stretch Release Party and Install Fest 2017, Kollam
- Linux installation fest 2017, FSUG-TVM, Trivandrum
- Free Software User’s Group Trivandrum
- Free Software Community of India

## AWARDS & ACHIEVEMENTS

- First Prize, Enigma - Linux Talent Hunt, Nakshatra 2018, NIT Calicut 2018
- First Prize, Enigma - Linux Talent Hunt, Nakshatra 2017, NIT Calicut 2017
- Best Paper Award for ”Replacing GUI with Shell”, Daksha Yantra, IHRD Attingal 2017
- Best CS Student Award, Naipunnya School of Management 2016
- Best Performer Award, Naipunnya School of Management 2016

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