

# 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, Kerala, India</b> <ul style="list-style-type: none"><li>Master of Computer Applications<ul style="list-style-type: none"><li>CGPA: 7.7 / 10</li></ul></li></ul>	Aug 2016 – Jun 2019
	<b>Naipunnya School of Management, Kerala, India</b> <ul style="list-style-type: none"><li>BSc. Computer Science<ul style="list-style-type: none"><li>CGPA: 7.9 / 10</li></ul></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>Gitlab:</b> <a href="https://gitlab.com/karuvally">https://gitlab.com/karuvally</a></li><li><b>LinkedIn:</b> <a href="https://linkedin.com/in/karuvally">https://linkedin.com/in/karuvally</a></li></ul>	
EXPERIENCE	<b>CAD Engineer, XILINX, Hyderabad, India</b> <ul style="list-style-type: none"><li>Develop, updated automation scripts</li><li>Manage Revision Control System (ICM GDP)</li><li>Support users on infrastructure issues</li></ul>	Jul 2019 – Present
	<b>CAD Engineer Intern, XILINX, Hyderabad, India</b> <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>	Feb 2019 – Jul 2019
	<b>Consultant, DAMAC Solutions, Trivandrum, India</b> <ul style="list-style-type: none"><li>Tasked with evaluating and deploying cloud backup solution</li></ul>	Aug 2018 – Nov 2018
	<b>Developer, Project Lifeboat, Kerala, India</b> <ul style="list-style-type: none"><li>Developed scripts for removing duplicates from distress call data</li><li>Helped in deploying and maintaining servers</li><li>Coordinated the development team</li></ul>	Aug 2018 – Sep 2018
	<b>Developer and Admin, KnowledgeBase @ CET, Trivandrum, Kerala, India</b> <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>	Jan 2018 – Nov 2018
	<b>Trainer, FestFlick, Trivandrum, Kerala, India</b> <ul style="list-style-type: none"><li>Served as resource person for IoT, Python and Linux, Git and Image Processing workshops</li></ul>	Sep 2017 – Nov 2018
	<b>Student Faculty, IoT Lab, CET, Trivandrum, Kerala, India</b> <ul style="list-style-type: none"><li>Tasked with conducting workshops on Linux, Python and IoT devices such as Raspberry Pi</li></ul>	Aug 2017 – Nov 2018
	<b>Homepage maintainer, Free Software Users Group, Trivandrum, Kerala, India</b> <ul style="list-style-type: none"><li>maintained <a href="http://tvm.fsug.in">http://tvm.fsug.in</a></li></ul>	Jul 2017 – Jan 2018
	<b>Developer and Admin, Dextro Systems, Alleppey, Kerala, India</b> <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>	Dec 2015 – Jan 2017
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 retrieving data from webapps.

## TOOLS AND TECHNOLOGIES

- **Linux**
  - Using Linux as the primary Operating System for the past 13 years.
  - 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
- **Git**
  - Experienced with Git and Gitflow
  - Worked on a number of personal and third party projects employing Git
  - Trained large number of students on Git
- **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

<b>PUBLICATIONS</b>	<b>CONFERENCES</b> [1] Aswin Babu Karuvally, Basith Hameem, Ann Jerin Sundar and John Prakash Joseph “Enhancing Performance and Reliability of Network File System,” in <i>Proceedings of the International Conference for Control Communication and Computing 2018</i> , Trivandrum India, Jul 2018.
<b>PROJECTS</b>	<ul style="list-style-type: none"> <li>▪ <b>NetDog</b> - dead simple configuration management 2018</li> <li>▪ <b>Scrapy Project</b> - scrap server info from Hurricane BGP toolkit 2018</li> <li>▪ <b>Lightup</b> - reaplacement for Intel’s xbacklight utility 2017</li> <li>▪ <b>Buzzer</b> - Zero cost alternative for quiz buzzers 2017</li> <li>▪ <b>Bak</b> - Fast, time-stamped archival or present working directory 2016</li> <li>▪ <b>SaveMyCode</b> - Automated archival of directories upon file change 2015</li> <li>▪ <b>Weather-Get</b> - Command line application to quickly retrieve and display weather 2014</li> <li>▪ <b>Duplex</b> - Easy double sided printing on normal printers 2012</li> <li>▪ <b>Modem Reset</b> - Auto reset and reconnect dialup connection upon failure 2011</li> </ul>
<b>INTERESTS</b>	GNU/Linux • Operating Systems • Network Programming • UNIX Philosophy • Shell Internet of Things • Vintage Computing • Virtualization • High Performance Computing
<b>HOBBIES</b>	Driving • Reading • Collecting vintage computers • Blogging
<b>VOLUNTEERING</b>	<ul style="list-style-type: none"> <li>▪ Debutsav 2018, CUSAT, Kochi, Kerala</li> <li>▪ Hasgeek Fifth Elephant 2018, Bangalore</li> <li>▪ Hasgeek Anthill 2018, Bangalore</li> <li>▪ Raspberry Jam Trivandrum 2018, Trivandrum</li> <li>▪ Debian Stretch Release Party and Install Fest 2017, Cherthala</li> <li>▪ Debian Stretch Release Party and Install Fest 2017, Kollam</li> <li>▪ Linux installation fest 2017, FSUG-TVM, Trivandrum</li> <li>▪ Free Software User’s Group Trivandrum</li> <li>▪ Free Software Community of India</li> </ul>
<b>AWARDS &amp; ACHIEVEMENTS</b>	<ul style="list-style-type: none"> <li>▪ First Prize, Enigma - Linux Talent Hunt, Nakshatra 2018, NIT Calicut 2018</li> <li>▪ First Prize, Enigma - Linux Talent Hunt, Nakshatra 2017, NIT Calicut 2017</li> <li>▪ Best Paper Award for ”Replacing GUI with Shell”, Daksha Yantra, IHRD Attingal 2017</li> <li>▪ Best CS Student Award, Naipunnya School of Management 2016</li> <li>▪ Best Performer Award, Naipunnya School of Management 2016</li> </ul>

[Last updated on 2019-07-21]