

# Rithvik Patibandla

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## Education

Exp. 2019	<b>Indian Institute of Technology, Kanpur</b> , Bachelor of Technology, Electrical Engineering	Kanpur, India
2015	<b>Sri Chaitanya Narayana Junior College</b> , Telangana State Board of Intermediate Education (Class 12 equiv.)	Hyderabad, India
2013	<b>New Vision High School</b> , Secondary School Certificate (Class 10 equiv.)	Khammam, India

## Work Experience

### Amazon

SOFTWARE DEVELOPER INTERN   MANAGER: SHREEKANT MANDKE	Hyderabad, India
	May 2018 - July 2018
<ul style="list-style-type: none"><li>Created a web service to handle the process of new client on-boarding and existing client access change requests.</li><li>Making all the necessary configuration changes across multiple fleets is now a one-click process for the team members thus reducing load on the team during peak times when hundreds of requests have to be handled in a single day.</li><li>Used technologies such as Horizonte (Amazon's adaptation of Spring MVC), G2S2 (Amazon's highly cacheable database) and DynamoDB.</li></ul>	

### Google Summer of Code 2018

THE LINUX FOUNDATION   MENTORS: AVEEK BASU (LEXMARK), DANNY BRENNAN (IBM), SMITH KENNEDY (HP)	Remote
	May 2018 - Aug 2018
<ul style="list-style-type: none"><li>Created ippdclint, a program to check structural errors in common printing file formats such as CUPS and PWG rasters, JPEG and PDF.</li><li>The program successfully identifies all mismatches between the file under check and corresponding file specification.</li><li>Used libraries such as MuPDF and libjpeg-turbo. Used multi-threading to reduce the runtime for multi-page documents.</li></ul>	

### Google Summer of Code 2017

THE LINUX FOUNDATION   MENTOR: DONGXU LI (LIBRECAD)	Remote
	May 2017 - Aug 2017
<ul style="list-style-type: none"><li>Created Common Print Dialog, a modern, ergonomic, distribution-agnostic print dialog library for Linux.</li><li>Application developers can use the library to add full print support to their applications.</li><li>The library will be maintained by OpenPrinting and aims to be the unified solution for all of Linux thus providing a great user experience.</li></ul>	

## Research

### Autonomous Underwater Vehicle - IIT Kanpur

STUDENT RESEARCHER   MENTOR: PROF. MANGAL KOTHARI	Kanpur, India
	Dec 2015 - Present
<ul style="list-style-type: none"><li>Serving as the Head of Electrical subsystem since Jan 2017.</li><li>Designed, developed and maintained several electrical systems of the vehicle most notable of which include a signal processor for on-board hydrophones and a battery management system to monitor and protect on-board LiPo batteries.</li><li>Stood in 2<sup>nd</sup> place out of 14 finalists in debut attempt at SAVe - 2017, NIOT, Chennai, India.</li></ul>	

### Abhyast Program - Boeing & IIT Kanpur

STUDENT RESEARCHER   MENTOR: PROF. SHANTANU BHATTACHARYA	Kanpur, India
	Feb 2017 - Apr 2018
<ul style="list-style-type: none"><li>The project aims to build an autonomous dual vehicle system consisting of a quad-copter and a ground vehicle to survey and perform tasks in an area of interest.</li><li>Worked on integrating data from LiDAR and Stereo cameras to generate a 3D map of the area in interest.</li><li>Use the aforesaid map to generate a path for the ground vehicle to follow for navigation and interaction with its environment.</li></ul>	

## Honors & Awards

2015	<b>All India Rank 667</b> , out of 150,000 students, Joint Entrance Examination (JEE) Advanced	India
2015	<b>All India Rank 1618</b> , out of 1.3 million students, Joint Entrance Examination (JEE) Mains	India
2014	<b>Awarded Fellowship</b> , < 2% acceptance rate, Kishore Vaigyanik Protsahan Yojana (KVPY)	IISc, Bangalore, IN
2013	<b>Awarded Scholarship</b> , < 0.2% acceptance rate, National Talent Search Exam (NTSE)	NCERT, India

## Personal Projects

<b>SBC</b>	A custom-made Single Board Computer capable of running Linux, based on Texas Instruments' AM3358 ARM Cortex processor.
<b>myOS</b>	A custom-made x86 kernel that will be ported to ARM to run on aforesaid single board computer.
<b>piTorrent</b>	A BitTorrent client with CLI and GUI made in Python.
<b>musync</b>	A web extension, mobile app combo to sync my YouTube playlist to my phone's Music app.

## Others

<b>Languages</b>	Python, C, C++, Java, JavaScript
<b>Open Source</b>	OpenPrinting, Avahi, Linux Kernel