

Rithvik Patibandla

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Education

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

Work Experience

Amazon

Hyderabad, India

SOFTWARE DEVELOPER INTERN | MANAGER: SHREEKANT MANDKE

May 2018 - July 2018

- Created a web service to handle the process of new client on-boarding and existing client access change requests.
- 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.
- Used technologies such as Horizonte (Amazon's adaptation of Spring MVC), G2S2 (Amazon's highly cache-able database) and DynamoDB.

Google Summer of Code 2018

Remote

THE LINUX FOUNDATION | MENTORS: AVEEK BASU (LEXMARK), DANNY BRENNAN (IBM), SMITH KENNEDY (HP)

May 2018 - Aug 2018

- Created ipddoclint, a program to check structural errors in common printing file formats such as CUPS and PWG rasters, JPEG and PDF.
- The program successfully identifies all mismatches between the file under check and corresponding file specification.
- Used libraries such as MuPDF and libjpeg-turbo. Used multi-threading to reduce the runtime for multi-page documents.

Google Summer of Code 2017

Remote

THE LINUX FOUNDATION | MENTOR: DONGXU LI (LIBRECAD)

May 2017 - Aug 2017

- Created Common Print Dialog, a modern, ergonomic, distribution-agnostic print dialog library in Qt, for Linux.
- Qt application developers can use the library to add full print support to their applications.
- The library will be maintained by OpenPrinting and aims to be the unified solution for all of Linux thus providing a great user experience.

Research

Autonomous Underwater Vehicle - IIT Kanpur

Kanpur, India

STUDENT RESEARCHER | MENTOR: PROF. MANGAL KOTHARI

Dec 2015 - Present

- Serving as the Head of Electrical subsystem since Jan 2017.
- 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.
- Stood in 2nd place out of 14 finalists in debut attempt at SAVE - 2017, NIOT, Chennai, India.

Abhyast Program - Boeing & IIT Kanpur

Kanpur, India

STUDENT RESEARCHER | MENTOR: PROF. SHANTANU BHATTACHARYA

Feb 2017 - Apr 2018

- 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.
- Worked on integrating data from LiDAR and Stereo cameras to generate a 3D map of the area in interest.
- Use the aforesaid map to generate a path for the ground vehicle to follow for navigation and interaction with its environment.

Honors & Awards

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

Personal Projects

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

Others

- Languages** Python, C, C++, Java, JavaScript
- Open Source** OpenPrinting, Avahi, Linux Kernel