

Jyotish P

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Education

- **IIIT Hyderabad** **Hyderabad, IN**
B.Tech(H) + M.S by Research in Electronics and Communication Engineering *2016–2020*
With specialization in Robotics
CGPA: 7.71

Work Experience

- **IIIT Hyderabad** **Hyderabad, IN**
Student Systems Administrator *May 2017–Present*
 - Responsible for maintenance and deployment of institute-wide infrastructure and services (Squid, LDAP, Email, lists, NS, CAS, PXE, etc), 802.1x over network, routing and firewall configuration serving 3000 users.
 - Automated server configuration for institute's **reverse proxy** server that serves over 150 domains.
 - Automated one of the **mail server migration** to Google Suite.
 - Deployed **transparent proxy** with SSL interception using **SNI parsing**.
- **Robotics Research Centre** **Hyderabad, IN**
Systems Administrator *Mar 2018–Present*

Responsible for the maintenance and deployment of centre's high performance cluster and various services (Monitoring, NS, LDAP, Git, etc) of the centre.

Projects

Notable Projects.....

- **Unrolling the Shutter** Machine Learning | Computer Vision | Python | Tensorflow
 - A Convolutional Neural Network that corrects the distortion caused due to rolling shutter of the camera from a single image.
 - Tried different approaches to improve the results of the existing models.
- **Neural Captioning** Machine Learning | Computer Vision | NLP | Python | Tensorflow
 - A combination of a CNN (trained on image net) and an LSTM networks that gives a caption for the given input image.
 - Implemented different versions of the network by tweaking LSTM's architecture
 - Traditional LSTM
 - LSTM with attention
 - LSTM with sentinel gate

- **Internet Relay Chat (IRC)** Distributed Systems | Socket Programming | C++
 - A simple implementation of IRC client-server in C++.
 - Supports multiple chatrooms with multi-threaded backend.
- **Guest Accounts Management** Python | Django
 - Portal for automation of adding guests to institute's central LDAP
 - Custom audits to restrict the logins of the guest users to access only the institute network but not rest of the services
 - Automating account deletion from the LDAP.

Other Projects.....

- **Transparent Proxy** that serves 2000 users. Go
- **Accounts Management Portal** inspired from accounts.google.com. Python | Django
- **Peer to Peer File Sync** A P2P file sharing and syncing client-server. Python
- **Autonomous Navigation of Quadrotors** ROS | C++ | Python
- **Reactive obstacle avoidance with Quadrotors** ROS | C++

Research

Undergraduate Research.....

Guide: Dr. K. Madhava Krishna, Robotics Research Centre, IIIT Hyderabad
 Areas: Motion Planning, Autonomous Navigation, Trajectory Optimization

Projects.....

- **Probabilistic Navigation under Non-Parametric Uncertainty**
 Mentor: Bharath Gopalakrishnan, Guide: Dr. K. Madhava Krishna
 - Characterizing robot and obstacle as noise samples from a non parametric distribution.
 - Moment matching of distributions using Reproducing kernel Hilbert space (RKHS).
 - Efficient implementation using reduced sets.

Positions

- Club Coordinator, Photography Club, IIIT Hyderabad 2017-2018
- Systems Administrator, Felicity 2018
- Photographer, Media Team, IIIT Hyderabad 2016-2017

Selected Coursework

- Distributed Systems*
- OS and Algorithms*
- Principles of Information Security
- Programming Workshop
- Statistical Methods in AI
- Computer Vision
- Communication Networks
- Mobile Robotics
- Advances in Robotics

Skills

Programming/Scripting.....

Regular: C • C++ • CSS • JS • Matlab • PHP • Python • Shell

Familiar: Go • Lua • MySQL • Ruby

Libraries/Frameworks.....

Robotics: Gazebo • OpenCV • ROS • Unreal Engine

Web: AngularJS • Django • Flask • Laravel • nodeJS • Rails

Machine Learning: PyTorch • Tensorflow • Torch

Systems.....

Nginx • Apache2 • LDAP • Postfix • Dovecot • Nagios • Icinga • Bind • Slurm • Docker • Libvirt
OpenVZ • Wazuh • Snort • Squid • iptables

Operating Systems.....

Linux • Windows