

Software Engineer	Cisco	IISc	RIT
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CONTACT INFORMATION	Raycon Lotus Apartment AECS Layout, Kundalahalli Bangalore, KA 560037, India +91 7012-556-335 bidhovbizar.office@gmail.com https://ece.iisc.ac.in/~bidhovbizar/
PROFESSIONAL INTERESTS	Distributed Systems and Networking, L2/L3 Network Protocols, Network Telemetry, Switching Technologies, Software-Defined Networking, Network Performance Optimization, Machine Learning
INDUSTRIAL EXPERIENCE	<div> Software Engineer at Data Center BU, Cisco: July,2022-July,2023 </div> <div> L3 Team <ul style="list-style-type: none"> Completed CCNA training and scored 29/30. Worked on few features requiring the creation of new CLI commands based on customer requirements from scratch. Worked through 3 release cycles, including responsibilities in SPAN and L3. Configured and debugged ISIS, BFD, VRF, ARP and other L2/L3 network issues. Gained expertise in Inter-Process Communication between network components especially between supervisor and line cards. Represented the L3 team for few customer bugs and led successful debugging sessions. Collaborated with other component teams to resolve several test stopper bugs on time. Conducted webinars on 'Classification of L3 commands' and 'How to construct a new command and DMEize' for internal knowledge sharing. Played a key role in resolving various L3 consistency checker bugs. Assisted in setting up Nexus Switches in a fat-tree topology and configuring them for testing purposes. Actively contributed to documentation, locally and on the company's wiki. Led the successful resolution and documentation of multiple bugs, conducting comprehensive root cause analyses. </div> <div> L2 Team Jan,2022-July2022 <ul style="list-style-type: none"> Programmed L2 SPAN sanity testsuite for the Cisco ASIC in a virtual platform. Utilized Nexus test automation docker to test and solve testsuite issues. Successfully closed bugs related to SPAN and L2 forwarding. Gained in-depth knowledge of packet walk in N7k and N9k switch. Proficiently worked with SPAN and ERSPAN for traffic monitoring. </div> <div> Intern at Data Center BU, Cisco: May,2021-July,2021 <ul style="list-style-type: none"> Assisted L2 and L3 teams in diagnosing and resolving time convergence issues components. Aided in identifying the root causes behind the increase in delays during the switch's transition from standby to active state. Developed and delivered training sessions for the Python script to automate the identification of convergence issues. </div> <div> Hardware Engineer at TIES: Aug,2015-April,2016 <ul style="list-style-type: none"> Collaborated with cross-functional teams at the Tropical Institute of Ecological Science to develop an automated Bio Gas plant. Focused on research in bacteria to enhance the efficiency and effectiveness of the Bio Gas plant. </div> <div> Intern at Robosapiens Technologies Pvt. Ltd: May,2015 <ul style="list-style-type: none"> Detailed study and analysis of ATMEGA328,ATMEGA168. Developed a robotic arm control system using ATMEGA328, enabling movement in two axes. </div>
PROJECTS EXPERIENCE	<ul style="list-style-type: none"> Networking: Constructed network using Mininet with multiple TRex Traffic Generator at hosts running stateless, stateful and Client Server L7 traffic and obtained telemetry.[2021] Constructed Simulation Framework in Python for large scale Data Center in Fat-Tree Topology. [2020] Simulated Fat-Tree topology to observe the the congestion of flow in NS3. [2020] Emulated Fat-Tree topology in Mininet to collect the telemetry data using Ryu Controller and OpenVSwitches. [2020] Java Development: Deployed Kafka system in Network Lab, used Confluent Message Generator to run experiments and optimized it for better performance than off the shelf. [2019]

COMPUTER PROFICIENCY	<ul style="list-style-type: none"> ▪ Machine Learning: Processed the telemetry data by applying sketching algorithms and observe the congestion.[2020] Studied Multi-label regression techniques such as xgboost, random forest, Naive Bayes over sketched data.[2019] Binary classification and predict the trump cards for a game of cards.[2019] ▪ Hardware Project: Developed Heterogenous Traffic Analyzer to be deployed in roads to calculate traffic intensity.[Funded By TEQUIP,2016] Created Electronic Braille reader to read from text paired with mobile via bluetooth.[Funded by AIYEHUM,IEEE,2015] ▪ C++ with SQL: Created billing system for storage and book keeping purpose, where the database source was stored at MySQL database. [2012] 	
	Programming Languages: Java, Python, C, C++ Programming Frameworks: Embedded C, AVR, Ryu, Pox, NS3 Tools & Technologies: Kafka, WireShark, Mininet, TRex, IXIA, Cisco Switches Operating System: LINUX, Windows, CentOS, RHEL, SONiC, NX-OS Linux Package: L ^A T _E X, Dockers Scripting: MATLAB, Bash Machine Learning Framework: Keras, Scikit-learn	
EDUCATION	M. Tech.(Research), Indian Institute of Science	07/2018-Present
	Electrical Communication Engineering, Network Lab ◇ Dissertation: <i>"Empirical study of load generation for Data Center Network"</i> ◇ Advisor: Parimal Parag	
	B. Tech., Rajiv Gandhi I.T., Kottayam	07/2012-07/2016
	Electrical Engineering Class Rank : 7/72	
	Higher Secondary School, Kendriya Vidyalaya, KGQ	06/2010-07/2012
RELEVANT COURSES	Science Stream Percentage : 94	
	High School,Kendriya Vidayalaya, KGQ	06/2004-07/2010
	Percentage : 92	
	Electrical Engineering: Digital Communications, Communication and Sensor Networks, Real Time System, Image Processing.	
	Mathematics: Probability, Convex Optimization, Queuing Thoery.	
HONORS & AWARDS	Data Science: Machine Learning, Practical Data Science, Pattern Recognition and Neural Network	
	<ul style="list-style-type: none"> ▪ All India rank 1276 in ECE stream in GATE, 2018. ▪ Project shortlisted for AIYEHUM,IEEE R10.[2016] ▪ Shortlisted for Mathematics camp For INMO (2011,2012) ▪ 99th rank in Junior Mathematics Olympiad, 2010. 	
MEMBERSHIPS	IEEE, Computer Society, WIE	
REFERENCES	Prateek Sadhukhan Leader, Software Engineering (Last Manager) Data Center BU Cisco Systems India Pvt Ltd, Bengaluru Tel: (+91) 98808 55911 E-mail: psadhukh@cisco.com	G. Shankar Gopalkrishnan Principal Software Engineer Data Center BU Cisco Systems India Pvt Ltd, Bengaluru Tel: (+91) 99805 41523 E-mail: gshankar@cisco.com