

Rahul Ethiraj

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EDUCATION

University of Southern California - Los Angeles, CA
Masters in Computer Science | Expected Dec 2019
GPA: 3.54/4.0

Amrita Vishwa Vidyapeetham University - Coimbatore, India
Bachelors in Computer Science & Engineering | May 2015
GPA: 3.56/10.0 (Distinction)

SKILLS

- **Networking** : CCNP, CCNA (R&S); Data Analysis, Data Center, TCP/IP, QoS, Load Balancing, Cisco IP routing & switching protocols, Cisco System Products; VMware ESXi, vCenter, vSphere; FC, SAN, FCoE, iSCSI
- **Hardware** : Cisco UCS (B and C series); Nexus 7k, 5k, 3k, 2k series, 1000v; MDS 9000 series; Brocade SAN switches
- **Technical** : Java, C, C++, Python, PHP, SQL, MySQL, Unix, JavaScript, XML, JSON, AJAX, jQuery, CSS3, HTML5, Bootstrap, AngularJS, React Native, UCS Central, Hyper-V, Red Hat, SUSE
- **Tools** : Android Studio, NetBeans, GIT, SVN, AWS-Elastic Beanstalk EC2/S3, Google Cloud, Lambda, Photoshop, Visio, SciPy, Weka, Pandas, NumPy, MATLAB, Scikit-Learn, TensorFlow, GNS3, Wireshark, ASP.NET
- **Soft skills** : Global delivery, customer interaction, mentoring, network consulting, team building

WORK EXPERIENCE

- Cisco Systems, San Jose – Software test automation, Intern** May 2019-Present
- Test manually and automate for features of the ASA (Adaptive security appliance) Next Generation Firewall platform.
 - Understand, install, execute testing of Umbrella connector against NGFW platform to maintain, enhance and ensure the overall quality using pyATS test framework. Investigate test failures, assist with bug investigation and reproduction.
- Research Assistant at USC – Sol Price School of Public Policy.** Dec 2018-May 2019
- Assist with cleaning a full-text dataset of all House and Senate committee hearings from the early 2000s to present.
 - Web scraping, text analysis and machine learning based on a hand-coded random sample of the dataset.
- COCOMO Software Engineering at USC – Intern** May-July 2018
- Supported project members in research involving a software effort cost estimation model originally developed by Dr. Barry Boehm – in a highly transparent Agile environment.
 - Managed a team of three and re-implemented COCOMO in Java so it is accessible/executable on any OS platform.
- Cisco Systems, Bangalore – Engineer, Server Virtualization** July 2015-Dec 2017
- Delivered solutions and resolved problems for Cisco clients through computer programming and systems engineering.
 - Performed troubleshooting on large scale data center networks (Linux, storage, NTP, OS/BIOS/firmware, VM migrations) and scripting to automate diagnosis of problems in network.
 - Provided consultation support, filed bugs and tested new software release thus improving serviceability of the product by working with engineering teams on fixing bugs.
 - Collaborated with different vendors like Dell, VMware, Microsoft, Citrix, Redhat, VCE, EMC and Netapp to fix complex multi-vendor environmental network, server and storage issues.
 - Decoded complex logs and core dumps to analyze and verify root cause of issues.
- Cisco Systems, Bangalore – Intern** Jan-June 2015
- Completed practical training and assisted in ongoing projects (automation and RMA reduction) through scripting.
 - Designed *CYK*, *LR parsers*, and *shift-reduce* in Python, to parse tech-support bundles from Unified Computing System (UCS) and extract required information for Big Data Broker (BDB).

PROJECTS

- Token Bucket Emulation using POSIX multi-threading – C, Unix** Jan-May 2019
- Emulate a traffic shaper which transmit packets controlled by a token bucket filter. Mutex and signal handling have been used to improve throughput and delay with statistics implemented after each run.
- Weenix Kernel Programming – C, GDB debugger, Unix** Jan-May 2019
- Implemented kernel threads, processes, mutexes, scheduler primitives, kshell, interrupt handling, virtual file system, virtual memory management, shadow objects for a general-purpose toy operation system called Weenix.
- Distributed Lookup Service (Socket programming) – C++ | [GitHub](#)** May-July 2019
- Designed a lookup service to locate data that is distributed over multiple nodes in the network. Implemented dictionary word requests from a client with help of three backend servers behind a main server over TCP & UDP connections.
- Gender Transformation using Adversarial Networks - GANs – Python, PyTorch | [GitHub](#)** May-July 2018
- Implemented a generator network that realistically transforms the gender of a person out of curiosity for what famous *Marvel men stars* would look like if born with two X chromosomes.
- Travel and Entertainment Search App – Node.js, Java, JS, jQuery, Bootstrap, Angular, AWS | [Website](#)** Jan-May 2018
- Developed a Web and an Android application, which allows users to search for a place using a live JSON API, view its information, save it as a favourite and/or post about it on Twitter. The web application is hosted on Amazon Cloud.