VENKATA KRISHNAN ANANTHA RAMAN

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EDUCATION

M.S. in Computer Science | SUNY Buffalo | Buffalo, NY, USA (GPA: 3.5/4) — Aug 17 – Dec 18

B.E. in Electronics & Communication Engg. | Mepco Schlenk Engg. College | Sivakasi, India (GPA: 8.58/10) — 2009 - 2013

WORK EXPERIENCE: 4 YEARS

Brocade Communications | **Software Engineer** | Bangalore, India — April 2016 – July 2017 (1.4 Years)

Virtual-LAG:

- Implemented **Virtual-LAG** on Brocade's Fast-Iron Family Routers

Layer-2 Networking Protocol Support:

- Implemented **Virtual-LAN** Configuration enhancements on Brocade's Fast-Iron Family Routers
- Worked on **Layer-2 Networking protocols.** (VLAN, xSTP, dot1-BR)

Aricent Inc. | **Software Engineer** | Chennai, India — Sep 2013 – April 2016 (2.8 Years)

Multi-Chassis Link Aggregation:

- Designed and developed Multi-Chassis Link Aggregation framework
- Fixed multiple issues on the existing base code in Layer2, Layer 3 Networking protocols. (HB, LAG, VRRP, ICCH)

Router-port Implementation on Broadcom:

- Designed and Implemented the Router-port feature over the Broadcom Chipset
- Was Awarded "Individual Excellence Award" for quality delivery

Netconf, CLI & Open Source:

- Successfully refactored portions of the CLI (Command Line Interface) code for robustness and scalability
- Designed and Integrated open source Netconf Protocol code with Aricent's Switching Software

HTML Generation Tool:

- Developed and maintained the Routing Software's Web-Interface Generation tool and increased speed by 100x

SKILLS

Programming:	C, Python, Java, R, HTML, PHP, Javascript, CSS, Shell, C++, XML, Mysql
Technologies:	Git, CVS, Layer 2/Layer 3 Networking Protocols, Apache, Linux, Android
Tools:	GDB, Valgrind, Coverity, Wireshark, Android Studio, Bootstrap, Dreamweaver, WordPress, R Studio, Jupyter

PROJECTS

- **Priority/MLFQ Scheduler – C**: Implemented a Priority scheduler using priority-donation to solve priority-inversion and Multilevel feedback queue scheduler to reduce average wait time for threads in Pint-OS.
- **Syscall Infra & Virtual Memory– C**: Implemented system calls, user program support & virtual memory Infra for Pint-OS.
- **Chat Application - C**: Implemented Client-Server Chat application with buffering and file sharing capabilities.
- **Reliable Data Transfer Protocols – C**: Implemented Alternating Bit, Selective Repeat and GoBack-N Protocols.
- **Software Defined Networking - C**: Implemented a Distance Vector routing protocol over simulated routers.
- **Exploratory Data Analysis – R**: Analyzed Influenza Outbreak by performing Exploratory data analysis by extracting tweets by using Twitter REST APIs and comparing the data with Official Influenza Statistics.
- **Group Messenger on Android - Java**: Developed a multicast-messenger by implementing Total FIFO Ordering of messages.
- **2048 Game Solver - Python**: Implemented an AI Based 2048 Game Solver using min-max algorithm and alpha-beta pruning.
- **Bike Share User Prediction – Python**: Implemented a Neural Network based Bike Share User Prediction by employing Gradient Descent and Back-propagation using historical data.

ADDITIONAL EXPERIENCE AND AWARDS

- **Individual Excellence Award:** Awarded for the project "Router-port implementation on Broadcom".
- **Best Technical Project Award:** Awarded for Implementing Session Initiation Protocol over TCP/UDP.
- **Team Excellence Award:** Awarded for the project "Dual-Unit Stacking over BFD".
- **Best Project Award**: Awarded for "Digital Water Level Indicator and Motor controller", "High-Def USB Multimedia Speaker", "Gesture Controlled Robot" and "Design of wearable gadgets with virtual interaction using augmented reality for enhanced vision" during under-grad course.
- **Motorola Scholar Programme: 2011-12:** Won **3rd Prize** out of 100+ projects for Automated Wheelchair Project.
- As a freelancer, developed multiple web-based solutions for clients across the globe through Upwork.