VENKATA KRISHNAN ANANTHA RAMAN

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EDUCATION

M.S. in Computer Science	SUNY Buffalo	Buffalo, NY, USA (GPA: 3.5/4)	Graduating - Dec 2018	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 and awarded "Individual Excellence Award"

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, Hadoop, Blockchain
Tools:	GDB, Valgrind, Coverity, Wireshark, Android Studio, Bootstrap, Dreamweaver, WordPress, R Studio, Jupyter

ACADEMIC PROJECTS

- **Distributed Key-Value Storage (Amazon Dynamo) – Android, Java**: Implemented a failure resilient distributed key-value storage inspired by Amazon Dynamo that provides Linearizability and availability
- **Distributed Hash Table – Android, Java:** Implemented a distributed hash-table based on Chord that provides node joins, ID space partitioning and ring based routing
- **Group Messenger on Android – Android, Java:** Implement an Android Group Messenger that offers Total FIFO Ordering
- **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
- **Data Analytics Pipeline using Apache Spark - Python:** Implemented data acquisition & analytics pipeline to fetch articles using NY-Times API. Used Hadoop MapReduce and Apache Spark to build article classification model
- **Handwritten Digit Classification - Python:** Implemented a Neural network based image classifier on mnist dataset
- **2048 Game Solver - Python**: Implemented an AI Based 2048 Game Solver using min-max algorithm and alpha-beta pruning

ADDITIONAL EXPERIENCE AND AWARDS

- **Blockchain Buildathon: April 2018: 1st Place** for **Blockchain** based distributed Supply Chain solution developed for Praxair.
- **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.
- **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.