1171 Boylston St, Apt 3
Boston MA 02215

ARAVIND KUMAR K.

(978) 798-2202
karavindkumar1993@gmail.com
github.com/aravind-kumar
linkedin.com/in/k-aravind-kumar/

EMPLOYMENT

Senior Software Engineer   **Sandvine Technologies**   **Fall 2016-Spring 2017**

- Implemented Hot-Standby for the High-Availability system resulting in a 50% improvement in performance the event of failure.
- Integrated pacemaker into the system for Horizontal Scaling and to support for MxN redundancy configurations.

Software Engineer   **Sandvine Technologies**   **Fall 2014 – Spring 2016**
- Improved the write speed of the High-Availability (HA) System by 80% by
    - Parallelizing the writes from different systems to separate DB's
    - Optimizing the number of operations by caching for picking the latest operation.
    - Use of Lock-Less Ring Buffers.
    - Offloading serialization of data using Protocol Buffers from Main Thread to each of subsystems designated threads.
- Implemented Batch-Reads and On-Demand reads on the High-Availability System thus
    - Transforming the system from a read-only/write-only system to a simultaneous read-write system.
    - Thereby reducing the downtime of the system in the event of a failure from 3-4hours to 0 (> 95% improvement).

Software Engineer, Intern   **Sandvine Technologies**   **Spring 2014 – Fall 2014**
- Devised the Emergency Call Support feature for Rx and Gx Diameter Applications of "Policy and Charging Rule Function (PCRF)" node of a wireless network which involved:
    - Creation of separate message queues and processing units to prioritize the Emergency Call Traffic.
    - Adding Support for Custom Policy Expressions/Hooks
    - Adding a Command Line Interface (CLI) framework.

TECHNICAL EXPERIENCE

Projects
- **Opensource Contribution:**
    - Contribute to Red Hat Pacemaker Project.
- **Sandvine Hackathon:**
    - Integrated Distributed Compiler (icecream) into the Sandvine Build System.
    - Resulting in 83% Improvement for each compilation.

EDUCATION

Boston, MA   **Northeastern University**   **Fall 2017 – Present**
- Grad: Computer Science at Northeastern University
- Graduate Coursework: Algorithms, Racket Programming
- Undergrad: Computer Science at Amrita University
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Comp. Architecture; Data Mining.

Languages and Technologies
- C++; C; Java; Python; C#; SQL; JavaScript;