Krishna Chaitanya Gudipati
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OBJECTIVE: Seeking a position in Software Development where my hands-on learning in computer programming can be effectively utilized in building new systems.

EDUCATION:

Master of Science, Computer Science (Computer Networks)	GPA: 3.47
University of Southern California (USC), Los Angeles, CA	Dec 2007
Bachelors in Electronics and Computers Engineering	81.2 % of 100
Acharya Nagarjuna University, A.P, INDIA	May 2006

RELEVANT COURSEWORK: Linux Kernel Architecture and Programming, Advanced Operating Systems, Inter networking and Distributed Systems, Computer Communications, Analysis of Algorithms.

COMPUTER SKILLS:

Programming Languages	: C, C++, JAVA, SQL, PERL and VHDL.
Web programming	: DHTML, CSS, AJAX, Java Script, JSP, AXIS, XML and JAVA DOM.
Network Protocols	: TCP/IP, UDP, OSPF, RIP, BGP, C-SDSP.
Network Simulators	: ETHEREAL & OPNET.
Operating Systems	: Windows, UNIX, Linux & CISCO IOS.
Router Configuration	: CISCO 4000 & CISCO 7000 routers.

ACADEMIC PROJECTS:

- Designed and programmed various parts of an **operating system in the Nachos OS simulator**.
  -Project included adding multi-threading, multi-processing, virtual memory management and networking using Remote Procedure Calls (RPC's) for communication across distributed systems.
  -Simulated the working of Distributed USC Credit Union on top of our Nachos OS simulator with multi threading and multiprocessing and ensured proper synchronization of transactions.
  -Developed in C++ and on UNIX.
- Simulated the working of a **Temperature Sensor Network** that uses the C-SDSP.
  - Project simulates the real sensor network, uses UNIX Socket API.
  - Built on top of the TCP sockets at application level a reliable time out mechanism specific to our application and support for meta data handling at the gateway.
  - Messages are in XML and project is developed in C++ on UNIX & using Java on Windows.
- Simulated **Internet queuing systems (M/M/1, Infinite, M/M/1/N, M/G/1/N)**
  -Project emulates the packet processing in real world routers and we calculate the performance of the routers. Project is developed in C++ on UNIX.
- Reproducing **the Border Gateway Protocol (BGP) convergence problem.**
  - Used CISCO routers and Zebra routing tool kit for configuring Linux workstations as routers.
- Implemented some real ISP techniques like **blackholing, sinkholing and trace back** to deal with **Distributed Denial of Service attacks.**
  - Used CISCO routers and Zebra routing tool kit for configuring Linux workstations as routers.
  - Used packit and tcpdump to trigger and collect the traces respectively.
- Developing **a person tracking sensor network**.
  - Using MICA2 sensor motes and TinyOS as Operating System and programming in nesC.
- Designed a company's website using **web programming** and also created **web services** for it to simulate the real world Business to Business (B2B) transactions.

WORK EXPERIENCE:

Riverbed Technology: (Network Integration team):

- Wrote a **packet generator tool**, which can be used to create crafted IP, GRE and ARP packets. Wrote the tool in C using libnet library. Used mainly in reproducing lot of customer bugs and kernel panics.
- Wrote an **ARP module** for the tool that does man in the middle stuff for SMB. The module's main purpose is to retrieve a mapping MAC entry for an IP address given by user. Uses libnet and libpcap and was written in C++ on linux.
- Worked on the **Riverbed Technology Services Platform** (UML instance) that can run the print and wowza streaming server which enables us to increase the throughput of the wan interface by establishing only one connection for multiple clients going to the streaming server.