Anirudh Ramanathan

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Objective

To earn a Master of Science degree in Computer Science leading to a career in research. My interests lie in **operating systems** and **distributed computing.**

Academics

Indian Institute of Technology, Banaras Hindu University
2008 – 2012

Bachelor of Technology in Electronics Engineering

- Graduated with *First Class Honors* and a GPA of **7.61** on a scale of 10.
- Relevant courses:
  - Architecture and Design of Microprocessor-based Systems
  - Microprocessor Engineering and Lab
  - Software Lab and Electronics Workshop

Certifications

- Microsoft Certified Professional in HTML5/JavaScript/CSS3 [1] — Jan 2013
- Web Applications using ASP.Net by NIIT — May 2010

Standardized Test Scores

- GRE – **338/340** and **4.5/6** in Analytical Writing — Jul 2013
  - Quant. – **170/170** (98 th percentile)
  - Verbal – **168/170** (98 th percentile)
- TOEFL iBT – **114/120** — Jul 2013

Online Courses (Udacity)

- CS-215 – Algorithms
- CS-262 – Programming Languages
- CS-344 – Introduction to Parallel Programming

Experience

Infrastructure Architect, NVIDIA Graphics Private Limited
July 2012 – Present

Bangalore, India

I work on the development of tools which help monitor and predict the utilization of computational and other resources across the organization. In addition to this, I develop and maintain tools that manage our **distributed computing cluster**.

Accomplishments

- Reengineered the resource monitoring tool to address memory leaks and performance issues, achieving up to **1.5x** reduction in memory consumption.
- Implemented an extensive test framework for it which has helped shorten the release cycle substantially.
- Identified and fixed flaws in the algorithms employed to share resources between different sub-systems on the computing cluster and achieved better throughput.
- Improved tracker heuristics to prevent unnecessary throttling of CPU intensive tasks.

Research Project, Center of Research in Microwave Tubes
Dec 2011 – May 2012

IIT-BHU, Varanasi, India

As part of a six-student research group, under the guidance of Prof. P.K. Jain, I worked on the optimization of cylindrical waveguide with a non-linear raised cosine taper and presented the observations in my **undergraduate thesis**.

Accomplishments

- Implemented the particle swarm optimization algorithm in C++ to obtain the optimum profile.
- Gained knowledge of swarm intelligence and exposure to research methodology.

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Intern, VizExperts Private Limited
May – Jul 2011
NCR, India

I worked on the development of a robust GPS (Global Positioning System) tracking system for law enforcement and, later, a complete VOIP client in Java.

Accomplishments

- Developed the server application and a GPS emulator in C# which helped design methods to allow tracking and routing with a high degree of accuracy.
- Implemented algorithms to deal with position uncertainty and server-client synchronization issues.
- Developed a VOIP client based on Peers, a Java based open source SIP client and contributed several patches back to the project.

Intern, Intex Technologies Limited
Jun – July 2010
NCR, India

My work entailed working with Audio, Display and Human Interface Devices (HID) research teams on various challenges with consumer products and exploring new ideas.

Accomplishments

- Implemented an application in C which carried out tests and helped calibrate display devices.
- Worked on a framework used to test the operation of audio processors and high fidelity amplifier modules.

Other Projects

- Contributor to free and **open source** software projects such as Ubuntu and Dragonfly BSD.
- Authored several open source applications for mobile and web platforms. [2]
- Among the top 20 highest ranked users from India (top 2% worldwide) on **Stackoverflow**, a programming community with over two million members. [3]

Awards & Achievements

- Placed in the performance zone of a '**Full Contributor**' at NVIDIA.
- Awarded certificate of appreciation for work in the CUDA code event at NVIDIA.
- Held a nation-wide rank of 542 in the National IT Aptitude test in 2010.

Leadership

- Serving as the point-of-contact for issues, dealing with support and feature requests for the software tools I developed at NVIDIA.
- Conducted seminars on **linux fundamentals** and the **distributed computing cluster** at NVIDIA in August 2013.

Extracurricular

- Volunteer for the website management group for nation-wide events in IIT-BHU.
- Member and active participant in the CUDA/GPGPU Special Interest Group at NVIDIA.

1. https://mcp.microsoft.com/authenticate/validatemcp.aspx with Transcript ID (1118573) and the Access Code (anirudhr)
2. http://www.anir.me/#projects
3. http://stackoverflow.com/users/759019/anirudh-r