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Anirudh Ramanathan

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401 Stasney St., Apt. 511, College Station, TX 77840

Education

Texas A&M University, College Station, Texas 2016

Master of Science in Computer Science GPA: **4.0/4.0**

Relevant coursework: *Advanced Compiler Design, Analysis of Algorithms, Parallel Algorithm Design and Analysis, Programming Language Design, Software Engineering.*

Indian Institute of Technology, Banaras Hindu University (IIT-BHU), India 2012

Bachelor of Technology in Electronics Engineering

Graduated with First Class Honors GPA: **7.61/10**

Relevant coursework: *Microprocessor Engineering, Microprocessor Architecture, Digital Signal Processing*

Work Experience

Software Engineering Intern, Google Inc. Summer 2015

Mountain View, California

Worked on Google Global Cache, the worldwide Content Delivery Network (CDN).

- Evaluated improvements to constraint optimization in the client-server mapping process.
- Implemented tools to evaluate characteristics of various algorithms in use in the CDN.
- Carried out experimental changes to the algorithms involved in the mapping process and evaluated the effect of various parameters on performance and estimated quality of experience.

Architect, Infrastructure & Tools, NVIDIA Graphics Private Limited 2012-2014

Bangalore, India

Worked on a resource monitoring application to process data and generate actionable reports, trends and predictions. Also owned and developed tools that managed the distributed computing cluster (*farm*).

- Implemented automated test-suites and reengineered the resource monitor, resulting in up to 5x improvement in performance and a smaller memory footprint
- Developed a Java/GWT application for querying and presenting resource data in several formats
- Improved utilization of the *farm* by identifying issues and modifying the load scheduling algorithm; subsequently implemented metrics to verify the results & monitor throughput

Intern, VizExperts Private Limited 2011

NCR, India

Created a real-time GPS tracking system for law enforcement and an integrated communication system for their control room

- Developed the server application using ASP.NET/C# and then created an interactive web UI for tracking GPS devices using the Google Maps & Earth APIs
- Built an NMEA sentence parser and a simulator to test our spatial error correction algorithms
- Forked and modified an open source Java SIP client to build the integrated communication system

Part-Time Web Developer, Department of ETID, Texas A&M University 2014

Texas A&M University, College Station, TX

Designed and implemented the frontend, PHP web backend and parts of the database for a supply chain simulation game intended for use in classrooms and later in contests involving different universities

Course Grader: CSCE-222 Discrete Structures for Computing 2015

Texas A&M University, College Station, TX

I graded assignments of undergraduate students and revisited some of my old abstract algebra and discrete mathematics curriculum.

Technical Skills

- **Programming Languages**: Python, C++, Java, Perl, C, Ruby, PHP, SQL, VBA
- **Web**: HTML, CSS, JavaScript, Google Web Toolkit, JQuery, SOA, MVC
- **Tools/Frameworks:** Ruby on Rails, CodeIgniter, Android SDK & APIs, Bash/Unix scripting, Django
- **Microsoft Certified Professional** in HTML5/JavaScript/CSS3[1]

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Projects

Optimizing source-to-source compiler for Fortran77 — 2015

- Built passes to optimize and automatically parallelize Fortran77 using the Minipolaris framework.
- Evaluated optimization phases by testing on real programs, performing dataflow and dependency analyses in static single assignment form, and emitting OpenMP directives to achieve speedup.

Evaluating performance of parallel algorithms using OpenMP and MPI — 2015

- Implemented parallel algorithms using the shared memory and message passing paradigms.
- Carried out in-depth analysis of performance of prefix sums (scan) with various algorithms, core counts, and input sizes.

Multiple Selections with Touchscreen Devices – Parasol Laboratory — 2014-2015

- Carried out research on common UI interactions and their semantics with touch screen interfaces
- Developed an early prototype Android GUI library implementing the formalism, allowing a better and faster way to carry out multiple selections. The library is slated for release in late 2015.

Supervisor: Dr. Jaakko Järvi, Associate Professor, Texas A&M University

AggieExperts: A Content Management System for Texas A&M Faculty — 2014

- Developed a web application using Ruby on Rails which enables faculty to create pages, allows administrators to review content and facilitates search by area of research and expertise
- Scrum Master for our team of six and responsible for ensuring that Agile methodology, TDD and BDD were strictly followed, iterations completed in time, and that the code quality was high

Practical construction of Maximum Bandwidth Paths — 2014

- Performed a comparative study of performance characteristics of several algorithms for computing the maximum bandwidth paths in random graphs of varying density using Python3

Other Activities

- 1st Prize for the creative use of Azure Cloud awarded by Microsoft for *WebBro*[2] at TAMUHack 2014
- Open source projects[3] including: Google Chrome extensions, Android applications, JQuery plugins, a database abstraction library and an IRC data miner
- Among the top 0.88% worldwide[4] on *StackOverflow* with a *reputation* of over 25,000
- Conducted training seminars on Linux and the distributed computing cluster at NVIDIA
- Author of Windows Phone applications which have had around 400,000 users since 2012

1. https://mcp.microsoft.com/authenticate/validatemcp.aspx with Transcript ID (1118573) and the Access Code (anirudhr)
2. http://tamuhack.challengepost.com/submissions/28993-webbro
3. http://people.tamu.edu/~anirudh4444#projects
4. http://stackoverflow.com/users/759019/