Aditya Pakki

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Education

- **University of Utah** — **Salt Lake City, UT**
  School of Computing, M.S. Computer Science — *2014 – Aug 2016*
  - Project: An Efficient Method for Component Failure Resiliency in Uintah. Advisor: Prof. Martin Berzins.

- **Jawaharlal Nehru Tech. University** — **Hyderabad, India**
  Bachelor of Technology, Information Technology — *2007 – 2011*
  - Project: Implementing secure message transmission across MANETs. Advisor: Prof. P. Gopalakrishna.

Technical Skills

Languages: C++, Python, C, Java, LaTeX, Bash scripting, SQL, MPI, OpenMP, CUDA.
Tools & Environments: Subversion, Git, Vim, DB/2, Eclipse, MATLAB, GNU Make, GDB, GCC, Visual Studio.
Past Experience: Go, JavaScript, Java Swing Framework, REST web services, COBOL, XML, JCL, SOAP.

Experience

- **Scientific Computing and Imaging Institute** — **Salt Lake City, UT**
  Graduate Research Assistant — *May 2015 - Aug 2016*
  - Added resiliency capabilities to Uintah Computation Framework using C++11 with Boost libraries & STL.
  - Implemented task re-execution capability for core failures and data bounded cubic interpolation routines for node failures. Presented partial results at RESPA'15 workshop at SC'15.

- **University of Utah** — **Salt Lake City, UT**
  Graduate Teaching Assistant — *Aug 2014 - May 2015*
  - TA for undergrad courses - Introduction to Scientific Computing & Object Oriented Programming.
  - Helped students with MATLAB, Python and Java programming as well as in using NumPy, SciPy numerical libraries in Linux environment.

- **Automatic Data Processing, Inc.** — **Hyderabad, India**
  Software Developer — *Aug 2011 - Jun 2014*
  - Agile methodologies: Kanban work flow for root cause analysis of production code and data issues; Scrum methodology working on user stories. (03/13 - 06/14)
  - SQL developer: Involved in SQL query reviews, performed query optimization, migrated queries from DATACOM to DB/2 on Mainframes, tuned indices, and wrote job scripts. (10/12 - 09/13)
  - Java developer: Worked on creating Exceptions filing system workflow, using Oracle backend, Swing, Hibernate, and REST web services, that integrated backend jobs on mainframes. (08/11 - 09/12)

- **Renaissance Software Technologies.** — **Hyderabad, India**
  Software Intern, Java Developer — *Mar 2010 – Aug 2010*
  - Worked on building and designing mobile game modules in J2ME, and JUnit for writing test cases.

Academic Projects

- **Mining system logs to predict failures:** Implemented Apriori and clustering algorithms, using Python on supercomputer logs to compare the efficiency of detecting failures.

- **Parallelizing RBF interpolation:** Implemented Radial Basis Function based Nearest Neighbor interpolation with emphasis on attaining weak scaling on Stampede supercomputer.

- **CUDA based P3DFFT algorithm:** Worked on migrating the C based library API to CUDA and measured performance improvements by running on cluster of NVIDIA Tegra TK1 GPUs.

- **Performance Comparison of Programming APIs:** Compared performances of various mini apps implemented in CUDA and OpenACC as part of multi core programming using GPUs course.