Sameer Surendra Jagdale
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EDUCATION

- McGill University — Montreal, Quebec
  Master of Science, Computer Science, **GPA: 3.86** — September 2012-August 2014
- University of Pune — Pune, India
  Bachelor of Engineering, Information Technology, **GPA: 3.70** — August 2008 - May 2012

CAREER-RELATED EXPERIENCE

McGill University — Montreal, Quebec
Teaching Assistant, Operating Systems — Winter and fall 2013

- Explained key OS concepts and guided students to appreciate challenges in developing operating systems kernels optimized for enhanced performance in different computing environments.
- Helped students simulate fundamental components of operating systems such as file system, inter-process communication, multi-threading et al.

Tata Consultancy Services — Pune, India
Project trainee — June 2011- July 2012

System to determine plasma temperature using real- time image processing

- Developed as part of my senior year project course. The project involved development of a prototype that calculated the temperature, in real time, of plasma during a nuclear fusion reaction from images captured from a high resolution camera. A GPU was used to enable high speed processing.
- Developed in C++ and utilized the OpenCV library for the image processing module and the OpenCL framework for GPU interfacing. GTK2 was used to develop the GUI.

TECHNICAL SKILLS

- Proficient in C, Java, C++.
- Basic knowledge of Bash, SQL, Python, HTML, MongoDB.
- Courses: Computer Networks, Distributed Systems, Compiler optimisation, Crowdsourcing

MASTER'S THESIS

Sable Research Lab, McGill University — Montreal, Quebec
Research Assistant — May 2013-Present

Compilation of Array-based Languages to Heterogeneous Architectures

- Extension to the Velociraptor compiler toolkit developed at the Sable Lab. It aims to compile functions written in high-level array based languages such as Matlab and Python to C++ with OpenMP pragmas and CUDA.
- Functions are packaged as shared libraries that can be called from the source language, allowing users to continue writing code in their preferred high-level language while compiling specific hot methods to parallel code.
- Carried out under the supervision of Prof. Laurie Hendren.

PROJECTS

Distributed Itinerary Management System

- Designed the system to distribute its core workload across separate servers for flight, car and hotel booking and implemented middleware for client interaction.
- Used Java's Remote method invocation API to establish communication between different servers.
- Implemented transaction management and two-phase commit to ensure conformance to ACID properties.

Online Gadget Store

- JavaScript, Servlet and JSP technologies were used along with MySQL as a DBMS back end to develop an online gadget store.

AutoGrader

- Developed to ease grading assignments in the Operating Systems course.
- Written in Python, the program parses source files and output of assignments for keywords and values.