VINEET KUMAR

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SUMMARY

- Seeking a **full-time** software development position **starting Jan 2015** (or later).
- **M.Sc Computer Science**, McGill University | **4+ years of relevant industry experience** in software design and development.
- Programming languages - *Proficient:* **Java**, **C**, X10 , MATLAB | *Prior experience:* PHP, Python.

WORK EXPERIENCE

ISENCORE Technologies September 2013 - Current
Lead Software Architect *Montreal, QC, Canada*

- As a part of the core founding team, I lead the software design and development efforts at the company.
  - Won first prize in the **Mcgill Dobson cup** 2014 startup competition.
  - Implemented (**in C**) the 3D object discretization module for **Quirdity**, ISENCORE's 3D simulation engine.
  - Developing (**in Java/Play framework**) the cloud-based delivery system for **Quirdity**.

McGill University January 2012 - April 2014
Research and Teaching *Montreal, QC, Canada*

- **Research Assistant, Sable Lab** - My research included program analysis and static compilation of dynamic languages.
  - Designed and developed (**in Java**) MIX10 : a MATLAB to X10 compiler for high-performance, under **Prof. Laurie Hendren's** supervision and with direct inputs from the X10 **design team at the IBM T.J. Watson research center**.(*bit.ly/1sZ8aqJ*)
  - Achieved **7 times (mean) faster** performance compared to the standard MATLAB implementation.
  - Discovered **2 bugs** and a **severe performance bottleneck** in the X10 compiler.
- **Teaching Assistant** - Program Analysis and Transformations, Compiler Design, and Introduction to Computer Systems.

Infosys Technologies Ltd. September 2008 - August 2011
Senior Systems Engineer *Pune, India*

- **Led** a team of 4 for **deployment performance management** for AT&T's online and mobility frontend and backend applications.
  - My team's job was to design and develop (**in C**) performance test scripts, analyze results, and troubleshoot performance issues.
  - Worked on 8 projects and they all exceeded performance SLA under peak loads.

Sun Microsystems January 2007 - May 2008
Intern - Student Tech Lead, APAC region/Campus Ambassador *Bangalore, India*

- Promoted from being one of the **only 27 Campus Ambassador across India** to one of the **only 5 Tech Leads worldwide**.
  - Conducted webinars and developed tutorials for Campus Ambassadors worldwide.
  - **Taught** a certificate course on **OpenSolaris** at the University.

PUBLICATIONS AND TALKS

- *Publication:* Vineet Kumar and Laurie Hendren. MIX10 : Compiling MATLAB to X10 for High Performance. In Proceedings of the 2014 ACM International Conference on **Object Oriented Programming Systems Languages & Applications (OOPSLA '14)**.(*bit.ly/1sft0PU*)
- *Talk:* Vineet Kumar and Laurie Hendren. MIX10 : Compiling MATLAB for high performance computing via X10 . 12th **Compiler-Driven Performance Workshop** at **CASCON 2013**.(*bit.ly/1hXms8N*)
- *Publication:* Vineet Kumar and Laurie Hendren. First steps to compiling MATLAB to X10 . In Proceedings of the 2013 ACM SIGPLAN X10 Workshop, **X10 '13** co-located with **PLDI 2013**.(*bit.ly/18owBUI*)

EDUCATION

McGill University April 2014
M.Sc. in Computer Science (CGPA: 3.56/4.00) *Montreal, QC, Canada*

- Master's thesis reviewed as **"Excellent"** by the external reviewer.

SASTRA University June 2008
B.Tech. in Computer Science & Engineering (CGPA: 8.93/10.00) *Thanjavur, India*

- Won the Dean's list scholarship for being among the **top 10%** students in the University.
- **Co-founded and led** GLOSS(GNU Linux & Open Source at SASTRA) club of the University.
- **Executive member** and **member of the editorial team** of the Student Association of School of Computer Science.

SELECTED OTHER PROJECTS

- FreeMeLegal: An Open source license recommendation engine (COMP 762 Recommender systems, individual).(*bit.ly/1m030GV*)
  - Recommendations based on similarities with the top projects on Sourceforge.net.
  - Implemented a crawler (in PHP) to collect data for top projects on Sourceforge.net.
- Performance Analysis and comparison of ZeroMQ and TCP (COMP 535 Computer networks, team of three).(*bit.ly/1m0dcPE*)
  - Implemented a ZeroMQ based P2P chat system and compared its throughput and latency to a TCP based P2P chat system.
- Analysis to identify complex numerical values for MATLAB programs (COMP 621 Program analysis, individual).(*bit.ly/15SYKmC*)
  - Developed a language to express information propagation through library function calls.(*bit.ly/1ezq93q*)
  - Accurate results for all the 20 benchmarks used by the McLab project.