
WORK EXPERIENCE

ISENCORE Technologies*Lead Software Architect*September 2013 - Current
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 the 3D object discretization module for **Quirdity**, ISENCORE's 3D simulation engine.
- Developing the cloud-based delivery system for **Quirdity**.

McGill University*Research and Teaching*January 2012 - April 2014
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.*Senior Systems Engineer*September 2008 - August 2011
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.

MySmartPrice*Developer (part-time)*October 2010 - July 2011
Pune, India

- MySmartPrice is an Indian **e-commerce startup** that provides a price comparison engine for online stores.
 - Contributed in the design and development of their core crawler algorithm.

Sun Microsystems*Intern - Student Tech Lead, APAC region/Campus Ambassador*January 2007 - May 2008
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. Paper accepted to be published in proceedings of **OOPSLA 2014**. (technical report at <http://bit.ly/1qlhG7V>)
- 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*M.Sc. in Computer Science (CGPA: 3.56/4.00)*April 2014
Montreal, QC, Canada

- Master's thesis reviewed as **"Excellent"** by the external reviewer.
- Won the summer differential fee waiver for being among the top-performing international students in the University.

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