

## SUMMARY

- **M.Sc, McGill University** with research in **Compilers and Program Analysis & Transformations** supervised by **Prof. Laurie Hendren** and assisted by the **X10 team at IBM Thomas J. Watson Research Center**.
- 3 years of industry experience with **Infosys Technologies (Senior Systems Engineer)** in deployment **performance management** for large-scale systems and **development**(in C).
- Internship with **Sun Microsystems** as **Student Tech Lead, APAC region/Campus Ambassador**.
- Experience of working (part-time) with a funded **e-commerce startup**, developing social network interfaces.
- Extensive **programming experience (C and Java)**.
- Experience in all areas of static Compilers including **program analysis and transformations, compiling dynamic languages and programming language design**.

---

Associated with some of the best people, schools and companies in Computer Science

## EDUCATION

- |  |  |
|--|--|
| <b>McGill University</b><br><i>M.Sc. in Computer Science (CGPA: 3.56/4.00)</i>   | August 2013 (expected)<br>Montreal, QC, Canada |
| • Awarded the <b>summer DFW scholarship for top performing</b> International Graduate students.<br>• Gave a grad seminar on X10 and compiling MATLAB to X10 .  |  |
| <b>SASTRA University</b><br><i>B.Tech. in Computer Science &amp; Engineering (CGPA: 8.93/10.00)</i>  | June 2008<br>Thanjavur, India                  |
| • For my B.Tech project, I developed DISCODE: A <b>decompiler</b> targeting C for OpenSolaris on x86.<br>• Won the <b>dean's list scholarship for being in the top 10%</b> of the University.<br>• <b>Co-founded and led GLOSS</b> (GNU Linux & Open Source at SASTRA) club of the University.<br>• <b>Executive member and member of editorial team</b> of Student Association of School of Computer Science. |  |

---

Graduate courses - Compiler Design, Program Analysis and Transformations, Advanced Techniques for Compiling Dynamic Languages, Distributed Systems, Computer Networks, Recommendation Systems for Software Engineering  
Active participation in extra-curricular activities

## EXPERIENCE

- |   |  |
|---|--|
| <b>McGill University</b><br><i>Research and Teaching</i>  | September 2011 - Present<br>Montreal, QC, Canada |
| • Research Assistant, <b>SABLE Lab</b> - My research interests include <b>program analysis &amp; transformation techniques</b> to compile dynamic programming languages to static object-oriented and HPC languages. My research is <b>supervised by Professor Laurie Hendren</b> . As a part of my thesis I am developing MIX10 : a <b>MATLAB to X10 (A new HPC language by IBM research) compiler</b> . I get direct assistance from the <b>X10 team at IBM Thomas J. Watson Research Center</b> .<br>• Teaching Assistant - COMP 621 Program Analysis and Transformations (Winter 2013).<br>• Teaching Assistant - COMP 520 Compiler Design (Fall 2012). |  |
| <b>Infosys Technologies Ltd.</b><br><i>Senior Systems Engineer</i>  | September 2008 - August 2011<br>Pune, India      |
| • <b>Managed</b> the offshore <b>deployment performance management</b> team for AT&T online and mobility.<br>• <b>Consulted on 8 projects</b> and they all exceeded performance targets under peak loads.<br>• Contributed to the <b>SEO recommendation system</b> used by the <b>Infosys global marketing team</b> .   |  |
| <b>MySmartPrice</b><br><i>Developer (part-time)</i>   | October 2010 - July 2011<br>Pune, India          |
| • MySmartPrice is an Indian <b>e-commerce startup</b> that provides a price comparison engine for online stores. I worked with the founders over weekends and brainstormed design and implementation strategies<br>• I Wrote the initial <b>social network interfaces</b> for facebook and twitter.   |  |
| <b>Sun Microsystems</b><br><i>Intern - Student Tech Lead, APAC region/Campus Ambassador</i>   | January 2007 - May 2008<br>Bangalore, India      |
| • I was promoted from Campus Ambassador to one of <b>only 5 Tech Leads worldwide</b> .<br>• Conducted webinars and developed tutorials for Campus Ambassadors worldwide.<br>• As a Campus Ambassador I was one of <b>only 27 Campus Ambassadors across India</b> .<br>• <b>Taught</b> a certificate course on <b>OpenSolaris</b> .<br>• Conducted several seminars on OpenSolaris and other Sun technologies in SASTRA and nearby Colleges.   |  |

---

Reserach, Teaching, Compilers, Program analysis, Program transformation and optimization techniques, Program language design, Code generation, C, Java, JastAdd, Flex, Bison, Beaver, MATLAB , X10

---

Software development, Software engineering, Management, SEO, Java, HP LoadRunner

---

e-commerce, startup, social network APIs, PHP, Apache, MySQL

---

Teaching, Evangelism, Open Source culture, OpenSolaris

## PUBLICATIONS

- Technical Report**
- Vineet Kumar and Laurie Hendren. First steps to compiling MATLAB to X10. TR-sable-2013-1, School of Computer Science, McGill University, Mar. 2013. (*Paper submitted for X10 Workshop (X10'13) at PLDI'13.*)

## PROJECTS

---

- isComplex value analysis for MATLAB programs: Analysis to identify if a value is complex or real.
- Open source license recommendation engine.
- WIG (a subset of <bigwig> language) to PHP compiler (in team of two).

---

*Data flow analysis, Open  
Source licenses, Compilers,  
Twitter API, OAuth, RSS,  
PHP, C, Javascript*