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## SUMMARY

- Seeking a **full-time** software development position **starting Jan 2015** (or later).
- **M.Sc Computer Science**, McGill University | **~5 years** of relevant work experience in all aspects of software development.
- Programming languages - *Proficient*: Java, C, X10, MATLAB | *Prior experience*: PHP, Python.

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## WORK EXPERIENCE

**ISENCORE Technologies**March 2014 - Current  
Montreal, QC, Canada*Lead Software Architect*

- 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  
Montreal, QC, Canada*Research and Teaching*

- **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](http://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  
Pune, India*Senior Systems Engineer*

- **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  
Bangalore, India*Intern - Student Tech Lead, APAC region/Campus Ambassador*

- 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.

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## 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](http://bit.ly/1sft0PU))
- *Talk*: Vineet Kumar and Laurie Hendren. **MiX10 : Compiling MATLAB for high performance computing via X10** . **12<sup>th</sup> Compiler-Driven Performance Workshop at CASCON 2013**. ([bit.ly/1hXms8N](http://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](http://bit.ly/18owBUI))

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## EDUCATION

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

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

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

- 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.

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## SELECTED OTHER PROJECTS

- **FreeMeLegal**: An Open source license recommendation engine (COMP 762 Recommender systems, individual). ([bit.ly/1m030GV](http://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](http://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](http://bit.ly/15SYKmC))
- Developed a language to express information propagation through library function calls. ([bit.ly/1ezq93q](http://bit.ly/1ezq93q))
- Accurate results for all the 20 benchmarks used by the McLab project.