# Darshan Sanghani

1301 S. Busey Avenue, IL 61801.

+1(217) 418-8842 ◆dsangha2@illinois.edu ◆www.darshansanghani.com

---

**Objective**:

Applying my skills in programming and software development, growing with my employer and helping the end-user experience *complex yet simple*, *intelligent*, *efficient* software. Seeking a full-time opportunity after graduation.

---

**Education**:

**UNIVERSITY OF ILLINOIS**                                                                      Urbana-Champaign. IL

**Bachelor of Science in** <u>**Computer Science**</u>, Dec 2012.

*Related Coursework:*

- <u>Software Engineering I/II</u>: Applying software analysis & design techniques to make world-class software.
- <u>Data Structures</u>: Learning, designing, implementing various data structures used in computer science.
- <u>Fundamental Algorithms</u>*:* Fundamental techniques for algorithm design and analysis.
- <u>Networking Lab:</u> Understanding and building server software used in various network infrastructures.
- <u>Embedded Systems</u>: Learning very low level programming in order to interact with micro-controllers.
- Other relevant courses such as Programming Languages & Compilers, Systems Programming, Computer Architecture, Theory of Computation, Database Systems. Will graduate on finishing *Software Engineering Courses*: A set of courses to increase proficiency in various industry level software development technologies and paradigms.

---

**Technical Proficiency:**

- Programming Languages: JavaScript, Java, C, C++, Python, OCaml, Objective-C, SQL, PHP
- Programming Languages (Beginner): Ruby; (by taking initiative through online tutorials and documentation), MIPS and x86 based architecture
- Database Systems: MySQL
- Frameworks/Libraries: Node.js, AFNetworking, jQTouch, Allegro, Express, Backbone.js, jQuery, Mocha and many more.
- Operating Systems: MacOS X, iOS, Windows, Linux.
- IDEs: Eclipse, IDEA, XCode, Visual Studio.

---

**Professional Experience:**

<u>Computerized Assessments & Learning</u>                                                              Lawrence, KS

Software Developer Intern                                                                            Summer 2012.

- Responsible for writing the foundations of porting the in-browser *JavaScript* exam engine to mobile platforms (specifically iOS).
- Decided on minimizing dependency on native mobile frameworks to facilitate quicker and uniform expansion.
- Came up with & added new features like inline video playback, audio responses (w/ uploading), accessibility tools to the test engine to broaden the possible question types.
- Self implemented a better and more responsive audio-level metering feature using *transformation matrices and interval mapping*, thus also reducing the dependency on third party libraries.
- *Interacting with User Experience, QA, analyst teams* during the planning and development phase to analyze use cases, infer requirements & making the application secure.

<u>QLess Inc.</u>                                                                                    Altadena, CA

Part time Software Developer                                                                        Nov'11-May'12.

- In charge of solving issues customers face with the product on-site. Differentiating a bug from a glitch, *identification, segregation and solution*.
- Analyze the issue and provide feedback to the customer with the best solution as soon as possible.
- Provide *preemptive support automations* to predict the nature of service degradation and their solution.
- Write *automated scripts* for customers to manage configuration issues, *maintaining and updating the Java based back-end web application.*
- This position also helped me understand the importance of *post-release cycle, CRM, and the principles behind reducing the cost of maintenance.*

<u>DebtManager</u>                                                                                   Champaign, IL

Creator                                                                                            Summer 2011.

- One of a kind application on iOS to help students, friends and people with informal/casual debts.
- My idea was to help the user record the money he owes and others owe him. I also designed a rating feature to rate the other person's credibility.
- Worked on this application right from the scratch: requirement identification, data modeling, development, testing.

Herd                                                                                    Champaign, IL
Co-Creator                                                                              Spring 2011.
  • A database system design project, requiring use of MySQL and web-development.
  • An online application to help users plan events with an aim to feed new events and, changes to already made events to the user through a more reachable mean, like SMS, emails instead of signing into the website every time.
  • Ability to dynamically search events a user can go to using date, time, place, and username combinations for flexibility.
  • Feature enabling user to find another user at an event within a 0.5-mile radius of his/her current event by using Google maps API to help user meet friends/colleagues more often.

---

**Personal Projects**:
- HNUpvotes, a node application to filter the latest and the best from HackerNews.
- Currently working on porting the TumblrV2 API to Python.
- Built a gesture recognizer for Kinect to be integrated with media players to allow controls like play/ pause/ stop/ enlarge and others through hand gestures.
- Built a lyrics search engine using BM25 retrieval formula with Rocchio feedback, also implemented document clustering, query likelihood methods for experience, user also gets a link to the specific song on YouTube, this was achieved with YouTube API. This was done on LemurCGI search engine template.
- Experienced with SDN, specifically writing control logic for OpenFlow switches, NOX controllers and creating a virtual network topology using Mininet.
- Built a VoIP application from scratch in Python, using a SIP library (PJSip). The idea is to help musicians jam online; we plan on minimizing the latency issues by compressing the audio before dispatch.
- Built a flight scheduler application in Python, which feeds off flight info from a JSON file and analyses the data to find the shortest path (Dijkstra's algorithm), time of travel, cost etc.
- Game development using Allegro framework: Developed a cross-platform 2D tile based platform game using the Allegro 5.0 Framework with an in built sprite cutter and background transformer.
- Developed software for a chain of retail stores using UML and C++, for *gathering data & analyzing product motion* which helps in identifying which class of products are bought more and less at a particular time of the year or month under a set of field values like weather type, if any festival. Thus helping them manage inventory more profitably.
- *(These and more of my projects can be found on my **gitHub (handle: dtx)**.)*

---

**Leadership and Activities:**
- SMILE (NGO): Team Leader
         Led a team to create several educational games in Java, C++ to encourage virtual education in youngsters.
- Member of the ACM.
- Member and a Team Leader at AIESEC.