

# Yihong Chen

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## Education

- June 2016 **PhD**, *Computer Science*, University at Buffalo, The State University of New York, **GPA: 3.7/4.0**.
- June 2011 **Master**, *Software Engineering*, Beijing Institute of Technology, China, **GPA: 3.3/4.0**.
- June 2008 **Bachelor**, *Electrical Engineering and Automation*, North China Institute of Science and Technology, China.

## Project & Research Experience

- December 2014 **Structuring Uncertainty Using the maybe Statement**, *Leader*.
- Present
    - Introduce [maybe syntax](#) to enable uncertainty programming for mobile system, implement [all components](#):
      - Custom Java Compiler, translate maybe syntax to ordinary Java code and bytecode
      - Gradle Plugin, provide seamless experience for Android developers to use maybe syntax: [demo video](#)
      - Web App, use Meteor to provide REST API and reactive web app
      - Android Library, communicate with maybe backend and cache choices
- October 2014 **Flexible and Effective Smartphone Energy Management: Jouler**, *Contributor*.
- Present
    - Introduce a policy framework enabling effective and flexible smartphone energy management
    - Add a system service in Android platform that provides several energy control mechanisms
    - Develop Android app with colleague to provide different energy management policies
- February 2014 **Project of Introduction to Operating Systems**, *Implemented large parts of a POSIX-compliant kernel*.
- May 2014
    - Implemented Synchronization Primitives, System Calls, and Virtual Memory Management
- April 2010 **Studying the Topic of Extracting Attributes and Their Values of Domain Objects**, *Research Proposal for Master degree*.
- June 2011
    - Used NLP and semi-supervised Machine Learning to extract attribute or attribute value from encyclopedia websites
- December 2009 **Theory and Method to Ontology Learning Field about Chinese Text**, *Cooperate with team and maintain previous projects*, Funded by National Natural Science Foundation of China.
- June 2010
    - Tagged and standardized time expressions from Chinese free text
    - Designed and implemented a web platform to demonstrate all subprojects (written in different languages)

## Programming Skills

- |            |  |         |  |
|------------|--|---------|--|
| Android    | <ul style="list-style-type: none"><li>Modify AOSP code: <a href="#">jouler</a>, <a href="#">maybe</a></li><li>Customize gradle build system</li><li>Develop plugin for Android Studio</li><li>Develop Android Apps in <a href="#">PhoneLab</a> project for research purpose</li></ul>                      | Java    | <ul style="list-style-type: none"><li>Wrote more than 20,000 lines of Java code, includes server side, Android platform/app</li><li>Customized <a href="#">Java compiler</a></li><li>Proficiency in Garbage Collection of Java &amp; Dalvik</li></ul>  |
| JavaScript | <ul style="list-style-type: none"><li>Familiar with Node.js &amp; Meteor, implement <a href="#">Maybe Backend</a>: <a href="#">maybe.xcv58.me</a></li><li>Meteor package: <a href="#">xcv58:collection-api</a></li><li>Wrote <a href="#">Chrome Extensions</a> and <a href="#">Atom Packages</a></li></ul> | Backend | <ul style="list-style-type: none"><li>Proficiency in RESTful API Design</li><li>Familiar with Linux servers: <a href="#">nginx</a>, Apache</li><li>Knowledge of Different Databases: MongoDB, MySQL</li></ul>  |
| C          | <ul style="list-style-type: none"><li>Implement all <a href="#">Harvard OS/161</a> assignments, able to modify Linux Kernel</li></ul>  | Python  | <ul style="list-style-type: none"><li>Familiar with matplotlib &amp; Plotly, use python to process log and plot figures</li></ul>  |
| Other      | <ul style="list-style-type: none"><li>Git, in daily usage</li><li>Use regular expression fluently in various languages</li><li>Groovy, in custom gradle plugin</li><li>Wrote Lisp codes for <a href="#">my Emacs config</a></li><li>Matlab, Machine Learning projects</li></ul>                            | Other   | <ul style="list-style-type: none"><li>PHP, customize Wordpress</li><li>Lua, wrote plugins for Google Pinyin</li><li>tmux, sed, grep, awk, etc. in daily usage</li><li>L<sup>A</sup>T<sub>E</sub>X, write papers/documentations</li><li><a href="#">my github Shell repository</a></li><li>Vim and Emacs in daily usage</li></ul> |