

# Yangqingwei Shi

(412)620-3127 | yangqin1@andrew.cmu.edu | shiyqw.me | github.com/shiyqw

## EDUCATION

---

SEP 2016-PRESENT Master of Sincience in Computer Science, **Carnegie Mellon University**  
SEP 2012-JUN 2016 Bachelor of Science in Computer Science, **Peking University**  
OVERALL GPA: 88.4/100 | MAJOR GPA: 89.5/100  
Member of Top Elite Plan (for top 10% students)

## SELECTED COURSEWORK

---

|          |                                     |                                      |                      |
|----------|-------------------------------------|--------------------------------------|----------------------|
| UPCOMING | Machine Learning                    | Graduate Algorithms                  | Web App Development  |
| FINISHED | Algorithm Design and Analysis (100) | Computer Network (92)                | Compiler Design (92) |
|          | C++ Programming (98)                | Types and Programming Languages (94) | Combinatorics (94)   |
|          | Software Engineering (88)           | Operating System (84)                |                      |

## SELECTED PROJECTS

---

SPRING 2015 A Programming Language for Complexity Control (OCaml | Group Leader)  
SPRING 2015 TuanJuPKU, a Platform for PKU Unions (Android+HTML | Group Member)  
SPRING 2015 Face Mock Show on WebChat (HTML+Python | Group Member)  
SPRING 2014 Metaheuristics for Float-Point Inaccuracy Detection (C | Independent)  
FALL 2013 Vi-like Text Editor Based on NCurses (C++ | Group Leader)

## RESEARCH EXPERIENCE

---

MAY 2014-JUL 2016 **Dynamic Mutation Analysis** (Software Testing, Program Analysis | C++)  
Advisor: Dr. Yingfei Xiong Software Engineering Institute, Peking University  
– Developed a novel model of mutation analysis that analyzed mutants during the execution of the program, and forked the execution only when a mutant led to a new system state;  
– Corresponding poster exhibited in PKU Young Scientist Symposium 2015; Corresponding thesis selected as Peking University Excellent Undergraduate Thesis.

JUL 2015-NOV 2015 **Language Based Architectural Control** (Software Architecture, Programming Languages | Java)  
Advisor: Dr. Jonathan Aldrich Institute of Software Research, Carnegie Mellon University  
– Extended a module system based on Wyvern Language to enforce the architectural behavior by integrating these architectural descriptions directly into the language.  
– Corresponding poster exhibited on CMU Poster Session, Sep. 2015.

SEP 2014-OCT 2015 **Contextual Dynamic QR Code** (Mobile Computing | HTML+Servlet+Android)  
Advisor: Dr. Kaigui Bian Institute of Network and Information Systems, Peking University  
– Initiated a novel QR code system which accepted inputs from many phone sensors besides the phone camera, and dynamically varied its output according to various contexts where the code is published;  
– Corresponding patent accepted by State Intellectual Property Office of China.

## AWARDS

---

NOV 2015 3rd Prize of Peking University Young Scientists Symposium (top 10%)  
OCT 2014 Wusi Scholarship of Peking University (top 10%)  
MAY 2014 3rd Prize of 13th ACM Programming Contest in Peking University  
OCT 2013 Outstanding Academic Award of Peking University (top 10%)

## SKILLS

---

PROGRAMMING: Proficient in Java, C, C++, Web Programming;  
Familiar with Functional Programming, Android;  
TOOLS: Proficient in Linux, Git, LaTeX;