

# Yangqingwei Shi

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## EDUCATION

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SEP 2016-DEC. 2017 **Carnegie Mellon University**, Master of Sincience in Computer Science  
SEP 2012-JUN 2016 **Peking University**, Bachelor of Science in Computer Science, SUMMA CUM LAUDE  
OVERALL GPA: 87.4/100 | MAJOR GPA: 88.6/100

## SELECTED COURSEWORK

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UPCOMING:	Machine Learning	Graduate Algorithms	Web Application Development
FINISHED:	Algorithm Design and Analysis	Computer Network	Compiler Design
	Computer Architecture	Programming Languages	Discrete Mathematics
	Software Engineering	Operating System	Probability Theories and Statistics

## SELECTED PROJECTS

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SPRING 2015 **UnionPKU, a Platform for PKU Unions** (Group Project | HTML + Android) [Report] [Android App]  
– Built a platform integrating all campus unions including a website for union administer and an Android application for union members.

SPRING 2015 **Face Emotion Analysis on Wechat** (Group Project | Python + HTML) [Webpage]  
– Combined several face recognition and emotion analysis algorithms to design an interesting app that tells if one's selfie resembles to any of the Emoji.

SPRING 2015 **Programming Language for Complexity Control** (Group Project | OCaml) [Report]  
– Designed and implemented an imperative programming language written for computational complexity control that any well-typed program can be computed in polynomial time.

## RESEARCH EXPERIENCE

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MAY 2014-JUL 2016 **Dynamic Mutation Analysis** (Software Testing, Program Analysis | C++) [Conference Paper][Poster]  
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;  
– repaired the manuscript and submitted to FASE 2017, pending review;;

JUL 2015-NOV 2015 **Language Based Architectural Control** (Programming Languages | Java) [Poster]  
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.

SEP 2014-OCT 2015 **Contextual Dynamic QR Code** (Mobile Computing | HTML+Servlet+Android) [Patent]  
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;

## AWARDS

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

## SKILLS

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PROGRAMMING: C++, Java, Python, OCaml, Scheme, HTML, Javascript, PHP  
TOOLS: Linux, Git, LaTeX, LLVM, ASM Framework, Django, MATLAB, OpenCV, OpenGL