

Boyang Li, Ph.D.

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SUMMARY

Senior software research engineer in Machine Learning Group at ABB Robotics R&D Center with 5 years' experience in professional software engineering. Draws on background in Human-Computer Interaction, Robotics, and Software maintenance. Seeking a role to distill the state-of-the-art into a suite of software tools and bring research ideas into products

MAIN PROJECTS

- **Production Quality Inspection** (ABB Group) aims to automatically detect anomaly from a group of robots in production line by adopting machine learning techniques
- **CoBlox** (ABB Group) is an ease of use project on motion control of industrial robotics to make robot programming less complicated. Received Honorable Mention Award in the ACM international conference of Human-Computer Interaction 2018. Ranked Top 1 conference in the field of Human computer Interaction by Google scholar
- **FlowLight** (ABB Group) is an automated indicator light to increase working efficiency. The software behind FlowLight automatically determines how busy users are and sets the light color accordingly. The work was featured on WSJ, New Scientist, NBC News, and other major media. The patented technology has been acquired by Embrava and the commercial version of the project was released on 2017. Received Honorable Mention Award in the ACM international conference of Human-Computer Interaction 2017
- **GVT** (a collaboration between the College of William Mary and Huawei) automatically verifies whether the GUI for a mobile application was implemented according to its intended design. Since March 2017, more than a thousand developers have been using GVT to develop EMUI 6.0. EMUI is an Android-based user system, which has 12 million v5.0 users in March 2017

EDUCATION

Ph.D. Computer Science

College of William and Mary, Williamsburg, VA

M.S. Computer Science

Miami University, Oxford, OH

B.S. Computer Science

Shandong Normal University, Shandong, China

PROFESSIONAL EXPERIENCE

ABB Group Robotics R&D Center

San Jose, CA

Senior Software R&D Engineer

October 2017 - Present

- Responsible in designing and maintaining fundamental modules in R&D center's robotic platform. ABB Group is a global Fortune 500 company operating mainly in robotics, power, and automation technology areas
- Contributed on Robotics Production Quality Inspection Project; Integrated machine learning algorithms into the robotic platform
- Developed software components for robotics motion control and provided timely support to venture companies on ABB Robotics motion controlling components
- Prepared and gave four YuMi ease-of-use demos to ABB executive committee and robotics division management team respectively. YuMi is ABB's first dual arm collaborative robot

ABB Group Corporate Research Center

Raleigh, NC

Visiting Scientist

February 2016 - September 2017

- Member of Industrial Software Systems Group, which creates methods and tools to increase quality and reduce cost of software development
- Worked on CoBlox Project for visual programming robotics. Worked on prototype design/implementation and simulation in 3D environment of RobotStudio
- Engaged in FlowLight Project as a lead programmer. Was in charge of software development, release maintenance and empirical study analysis

ABB Group Corporate Research Center**Raleigh, NC****Research Intern****May 2015 - September 2015**

- Conducted researches on source code summarization. The goal is to help developers understand software artifacts easier
- Led the design and implementation of ChangeScribe.NET, a visual studio extension for generating commit messages (commit logs, commit notes) automatically
- Led the design and implementation of UnitTestScribe, which generates documentation of unit test cases
- Conducted a large scale of empirical study with 212 developers to evaluate the project

College of William and Mary**Williamsburg, VA****Research Assistant****August 2011 - December 2015**

- Researched on source code analysis, source code summarization, mining databases. Published research papers among top tier international conferences
- Had three years' experience on collaboration between academia and industry (e.g. ABB Group, Huawei Technologies Co., Ltd.). Our projects successfully delivered to the companies

Miami University**Oxford, OH****Graduate Assistant****August 2009 - July 2011**

- Researched on data security and access control
- Teaching Assistant at CSE385 Database Systems and CSE271 Object-Oriented Programming

Neusoft Corporation**Beijing, China****Software Engineer****October 2007 - June 2009**

- Neusoft Corporation is the largest China-based company providing IT solutions and services, and the largest software outsourcing firm in China
- Worked on Budget Management System for National Railway Enterprise in China
- Provided frameworks and reusable components to support other businesses

PUBLICATIONS

- Had refereed international conference publications at ICSE'18, ICPC'18, CHI'18, ICPC'17, CHI'17, ICSME'16, TWC'16, ISSTA'16, ICST'16, ASE'15, STTT'15, ICST'14, ICSTW'14, OOPSLA'13, TACAS'13, DBSec'11. The publication details are available at <http://boyangli.net>
- **Honorable mention award***: "Evaluating CoBlox: A Comparative Study of Robotics Programming Environments for Adult Novices." in the ACM international conference of Human-Computer Interaction, 2018
- **Honorable mention award***: "Reducing Interruptions at Work: A Large-Scale Field Study of FlowLight." in the ACM international conference of Human-Computer Interaction, 2017

* Awarded as the top 5% of the submissions in the conference

TECHINICAL SKILLS

Programming Languages: Python, Java, C#, C++, XML, RAPID
IDEs: Visual Studio Code, Eclipse, Microsoft Visual Studio, RobotStudio
Platforms: Linux, Windows, Mac OS
Databases: MongoDB, MySQL
Others: Git, R, ClickOnce, Jenkins, Redis, RabbitMQ

LANGUAGE

Fluent in English and Chinese