Changjian (CJ) Zhang

Email changjiz@andrew.cmu.edu **GitHub** https://github.com/SteveZhangBit
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EDUCATION

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
Ph.D. in Software Engineering, advisors: Dr. Eunsuk Kang & Dr. David Garlan Aug 2019 – Aug 2024

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
M.S. in Information Technology (Software Engineering) Aug 2017 - Aug 2018

Beijing Institute of Technology Beijing, China
B.S. in Computer Science and Technology Sept 2012 - Jun 2016

SELECTED PUBLICATIONS

- **Robustification of Behavioral Designs against Environmental Deviations.** (ICSE 2023)
  Changjian Zhang, Tarang Saluja, Romulo Meira Goes, Matthew Bolton, David Garlan, Eunsuk Kang.

- **AlloyMax: bringing maximum satisfaction to relational specifications.** (ESEC/FSE 2021, 🏆 Distinguished Paper)
  Changjian Zhang, Ryan Wagner, Pedro Orvalho, David Garlan, Vasco Manquinho, Ruben Martins, and Eunsuk Kang.

- **A behavioral notion of robustness for software systems.** (ESEC/FSE 2020)
  Changjian Zhang, David Garlan, and Eunsuk Kang.

WORK EXPERIENCE

Amazon.com Inc Phoenix, AZ
SDE Intern May 2023 – Aug 2023

- Developed an internal tool for making on-demand data requests to Amazon's Payment Service Providers (PSP), using React.js and AWS services including IAM, API Gateway, Lambda, DynamoDB, and CDK.
- Automated 30% of tickets asking for ad-hoc data requests; Reduced ticket processing time from days to minutes.

Carnegie Mellon University, Institute for Software Research Pittsburgh, PA
Research Associate & Teaching Assistant Aug 2018 - Aug 2019

- Researched in the CMU ABLE Group on Self-adaptive Systems and Robotic Operating System (ROS).
- Served as TA for 17-651 Models for Software Systems and 17-655 Software Architecture.

NASA Jet Propulsion Laboratory FPrime Project Pittsburgh, PA
Team Lead & SDE Jan 2018 - Aug 2018

- Designed and implemented a visualization tool using Typescript, Vue.js, and Electron for the JPL FPrime Framework used for the NASA Mars Mission. Largely improved their development efficiency.
- Managed the team Scrum process, project planning, and project tracking process.

Baidu Inc. Nuomi Movie Department Beijing, China
SDE Intern Sept 2015 - Jan 2016

- Developed and refactored a system to match massive ticket orders between different movie databases by using Python and Pandas. Improved the efficiency of their business process by 10 times.
- Built a web-based interface for marketing people to replace their manual business process by using Python and Flask. Reduced their business processing time from weeks to hours.
- Collected ticket data using web-crawlers with Python and Scrapy; Analyzed using Pandas to support marketing.

Taoxue - Online Used Marketplace Startup (raised 200,000 angle investment) Beijing, China
Co-Founder & Tech Lead May 2014 - Feb 2015

- Developed the backend of the system using Java, Spring, and Hibernate, and the iOS App with Objective-C.
- Built a web-based administrative management system using JavaScript and Bootstrap.

AWARDS

- ACM SIGSOFT Distinguished Paper Award at ESEC/FSE 2021.
- 2018 CMU Master of Software Engineering Program Graduate Fellowship.
- Beijing Institute of Technology 2nd-class Scholarship (2013, 2014), 3rd-class Scholarship (2015).

SKILLS

Programming Languages: Kotlin/Java ≈ Python > JavaScript/TypeScript, HTML/CSS > GO > C.
Model Checking Tools: Alloy ≈ LTSA ≈ Prism ≈ TLA+ > Z > Spin.