Ameya Ketkar

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EDUCATION

PHD | COMPUTER SCIENCE
Oregon State University
Expected Dec 2021 | Corvallis, OR
Cum. GPA: 3.73

BE | COMPUTER ENGINEERING
Mumbai University
Passed with Distinction

LINKS

Github: **ameyaKetkar**
LinkedIn: **ameya-ketkar**

COURSEWORK

GRADUATE
Programming Languages
Advanced Programming Languages
Designing Domain Specific Language
Software Engineering
Algorithms and Data Structures
Machine Learning and AI

SKILLS

PROGRAMMING
Over 5000 lines:
• Java •C#
•MySQL
Over 1000 lines:
•Haskell •Standard ML •Coq
Familiar:
•Idris •Scala
Frameworks and Tools:
• Java-Spring •Eclipse-JDT •Error-prone
•Apache-Camel • JAXB • J-Behave

AWARDS

•Outstanding Contribution 2016 (Barclays - 2016)
•Distinguished Artifact Award (OOPSLA-2017)

SERVICES

•Sub-Reviewer |ASE 2017
•Volunteer English Teacher, Teach India

EXPERIENCE

BARCLAYS | Technical Analyst
Securitized Product Technology | August 2014 – February 2015 | Pune, India

- Enhanced the C#-WPF based desktop application used by traders to buy-sell loans in the U.S. Market.

Trade And Transaction Reporting | February 2015 – August 2016 | Pune, India

- Worked on the OneReg project, which was a common platform developed at Barclays for trade and transaction reporting to 40 monetary authority.
- At OneReg I designed a common core library for generating the XML reports as required by the regulators. This library was used to express 40 kind of reports.
- Designed a common test-framework for testing the all generated report.
- I was a core developer of the component reporting to Hong-Kong Monetary Authority. It was the first released component of the OneReg platform.
- I was involved in setting up continuous-integration environment and dev-ops infrastructure for OneReg. I also managed the post-release support.
- I received the `Barclays Outstanding Contribution Award 2016` for my contributions to the OneReg platform.

RESEARCH

OREGON STATE UNIVERSITY | Software Evolution Group
Advisor:Dr.Danny Dig
Jan 2017 – September 2017

- Developed a code-mining application for analyzing Java program constructs, which can (1) fetch 1000s Github repositories matching the input conditions, using the GitHub API (2) extract semantic and syntactic information of any program construct in the Java source code
- This application successfully analyzed 100,000 lambda expressions used in the top 2000 starred Java repositories. These results received `Distinguished Artifacts Award` at OOPSLA 2017.

October 2017-Present

- I designed and implemented T2R, the first ultra-large scale type migration(in Java) tool which can scale to 300 millions of LOC.
- In collaboration with Google's Error-Prone team,I successfully adapted T2R to specialize usages of functional interfaces in their java code-base.
- T2R is an a IDE-independent type migration tool built upon error-prone. It can integrate with build-systems like maven or gradle.
- The refactoring `patches` produced by T2R were accepted by very mature and popular projects like Cassandra, CoreNLP, SonarQube.
- Currently I am designing Transformation Specification Language with which developers can express how to adapt to type-breaking changes.
- In the future developers can use this language to express and perform refactorings like "Change Method Return Type" or "Migrate Type".

PUBLICATONS

- Davood Mazinanian, Ameya Ketkar, Nikolaos Tsantalis, and Danny Dig. 2017. Understanding the Use of Lambda Expressions in Java. Proc. ACM Program. Lang. 1, OOPSLA, Article 85 (October 2017), 31 pages.