AMAN SHARMA

PhD student, KTH Royal Institute of Technology

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EDUCATION

KTH Royal Institute of Technology
February 2023 – January 2028

- PhD student in Computer Science

Indian Institute of Technology, Roorkee
July 2017 – September 2021

- Bachelor of Technology
- **CGPA :** 7.665/10

PUBLICATIONS

1. Augmenting Diffs With Runtime Information, Khashayar Etemadi, **Aman Sharma**, Fernanda Madeiral, Martin Monperrus In *IEEE Transactions on Software Engineering 2023*
2. Challenges of Producing Software Bill of Materials for Java, Musard Balliu, Benoit Baudry, Sofia Bobadilla, Mathias Ekstedt, Martin Monperrus, Javier Ron, **Aman Sharma**, Gabriel Skoglund, César Soto-Valero, Martin Wittlinger In *IEEE Security & Privacy 2023*

TEACHING EXPERIENCE

I have been a teaching assistant for the following courses:

- DD2482 Automated Software Testing and DevOps
- DD2385: Computer Security
- DD1385: Software Engineering
- DD1310: Programming Techniques
- DH2642 Interaction Programming and the Dynamic Web

WORK EXPERIENCE

KTH Royal Institute of Technology
November 2021 - January 2023

- Worked as a research engineer in ASSERT Research Group.
- Contributed to Sorald which is an automatic program repair tool for SonarQube static analysis warnings.
- Built collector-sahab which augments the static diff with runtime information.

Google Summer of Code
2 times: May 2020 and May 2019

- Worked with Accord Project and Vega Project at University of Washington respectively.
- Added visualization sharing fucntionality in Vega Editor
- Created a MS Word add-in to import smart contracts into document.

Iterative.ai
October 2019 - November 2019

- Worked as remote intern for Iterative.ai.
- Added a command to their open-source tool, Data Version Control, some features and fixes in the documentation: https://dvc.org/.
- The features added in the documentation improved accessibility by helping users to understand DVC's jargon.

TECHNICAL PROJECTS

by-the-pool

- Goal to identify causes of unreproducible builds in Java artifacts and suggest ways to mitigate them.
- Paper: WIP
- Dataset: https://github.com/chains-project/reproducible-central

sbom.exe

- Tool with a goal to provide runtime integrity for Java applications.
- Paper: `https://arxiv.org/abs/2407.00246`
- Tool: `https://github.com/chains-project/sbom.exe`

collector-sahab

- It augments the static line-based diff with runtime information about variable value changes in two executions of a Java program.
- Paper: `https://arxiv.org/abs/2212.11077v2`
- Tool: `https://github.com/ASSERT-KTH/collector-sahab/`

sorald

- It automatically repairs static analysis warnings reported by SonarQube.
- Paper: `https://arxiv.org/abs/2103.12033`
- Tool: `https://github.com/ASSERT-KTH/sorald/`

sbom-2023

- A dataset of 156 SBOMs that were studied for the quality of dependency list they produce.
- Paper: `https://arxiv.org/abs/2303.11102`
- Tool: `https://github.com/chains-project/SBOM-2023`

TALKS

- JFokus 2025 [slides]
- ICSE 2024 [slides]
- EclipseCon 2022 [video] [slides]
- SciPy India 2019 [video] [slides]
- More on `https://algomaster99.github.io/talks/`

SKILLS

Java, Python, JavaScript, Go, PHP, TypeScript, C++

REFERENCES

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