

Nathan Munaiah

Department of Software Engineering
Rochester Institute of Technology
Rochester, NY, USA
+1 (401) 286 2053
nm6061@rit.edu
github.com/nathanmunaiah

Education

Ph.D. 2019 (Expected), Computing and Information Sciences, Rochester Institute of Technology

Advisor: Dr. Andrew Meneely. GPA: 4.0.

B.E. 2009, Computer Science and Engineering, Visveswaraiah Technological University, Karnataka, India

Research Experience

2014-Present Graduate Research Assistant, Rochester Institute of Technology

- Leading the effort in the research and development of fine-grained metrics that enable the proactive assessment of security risk throughout the development lifecycle of a software system.
- Leading a research project in which the effectiveness of a commonly used measure of security vulnerability severity—the Common Vulnerability Scoring System (CVSS) base score—is being evaluated.
- Developed a tool—**reaper**—that is capable of classifying a GitHub repository as containing an engineered software project or otherwise.

Publications

Journal Articles

- J.1.** **Nathan Munaiah**, Felivel Camilo, Wesley Wigham, Andrew Meneely, and Meiyappan Nagappan. 2016. Do bugs foreshadow vulnerabilities? An in-depth study of the chromium project. *Empirical Software Engineering*: 1–43. <http://doi.org/10.1007/s10664-016-9447-3>
- J.2.** **Nathan Munaiah**, Steven Kroh, Craig Cabrey, and Meiyappan Nagappan. 2017. Curating GitHub for Engineered Software Projects. *Empirical Software Engineering*: 1–35. <http://doi.org/10.1007/s10664-017-9512-6>

Conference Papers

- C.1.** Daniel E. Krutz, **Nathan Munaiah**, Anthony Peruma, and Mohamed Wiem Mkaouer. Who Added that Permission to My App? An Analysis of Developer Permission Changes in Open Source Android Apps. In *Proceedings of the International Conference on Mobile Software Engineering and Systems (MOBILESoft '17)*. ACM, New York, NY, USA, (to appear).
- C.2.** **Nathan Munaiah**, Benjamin S. Meyers, Cecilia O. Alm, Andrew Meneely, Pradeep K. Murukannaiah, Emily Prud'hommeaux, Josephine Wolff and Yang Yu. Natural Language Insights from Code Reviews that Missed a Vulnerability: A Large Scale Study of Chromium. In *International Symposium on Engineering Secure Software and Systems*. Springer International Publishing, (to appear).

Workshop Papers

- W.1.** **Nuthan Munaiah** and Andrew Meneely. 2016. Beyond the Attack Surface: Assessing Security Risk with Random Walks on Call Graphs. In Proceedings of the 2016 ACM Workshop on Software PROtection (SPRO '16). ACM, New York, NY, USA, 3-14. DOI: <https://doi.org/10.1145/2995306.2995311>
- W.2.** **Nuthan Munaiah** and Andrew Meneely. 2016. Vulnerability Severity Scoring and Bounties: Why the Disconnect?. In Proceedings of the 2nd International Workshop on Software Analytics (SWAN 2016). ACM, New York, NY, USA, 8-14. DOI: <https://doi.org/10.1145/2989238.2989239>
- W.3.** Iván Tactuk Mercado, **Nuthan Munaiah**, and Andrew Meneely. 2016. The Impact of Cross-platform Development Approaches for Mobile Applications from the User's Perspective. In Proceedings of the International Workshop on App Market Analytics (WAMA 2016). ACM, New York, NY, USA, 43-49. DOI: <https://doi.org/10.1145/2993259.2993268>
- W.4.** Daniel E. Krutz, **Nuthan Munaiah**, Andrew Meneely, and Samuel Malachowsky. 2016. Examining the Relationship between Security Metrics and User Ratings of Mobile Apps: A Case Study. In Proceedings of the International Workshop on App Market Analytics (WAMA 2016). ACM, New York, NY, USA, 8-14. DOI: <https://doi.org/10.1145/2993259.2993260>
- W.5.** **Nuthan Munaiah**, Casey Klimkowsky, Shannon McRae, Adam Blaine, Samuel Malachowsky, Cesar Perez, and Daniel E. Krutz. 2016. Darwin: A Static Analysis Dataset of Malicious and Benign Android Apps. In Proceedings of the International Workshop on App Market Analytics (WAMA 2016). ACM, New York, NY, USA, 26-29. DOI: <https://doi.org/10.1145/2993259.2993264>

Development Experience

2009-2014 Software Engineer, Infosys Limited, India

- Developed several web applications for internal stakeholders and customers of Citizens Bank.
- Ensured business continuity by implementing a time-sensitive fix to citizensbank.com when legacy MapQuest services were deprecated.
- Developed a RESTful service used to periodically check the sanity of response from CashEdge services. The service helped improve time-to-market of a business critical application that used CashEdge services.

2008-2009 Technical Support Intern, Microsoft Global Technical Support Center, India

- Trained on the deployment and administration of Windows Server 2003 based Active Directory infrastructure, SQL Server 2008, and Exchange Server 2003.

Technical Skills

Languages Python, R, Visual C#

Frameworks Django, ASP.NET, WCF

Databases PostgreSQL, SQLite, SQL Server, Oracle

Community Service

- Student volunteer at the 38th International Conference on Software Engineering, Austin, TX, USA.
- Student volunteer at the 24th International Symposium on the Foundations of Software Engineering, Seattle, WA, USA.

Achievements

- Awarded the quarterly best performer award in the first quarter of employment at Infosys Limited.
- Awarded the first place at the Adobe Flex Boot Camp 2008.