David Shriver

Contact Computer Science Department

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RESEARCH My research interests lie in the intersection of software engineering and artificial intelligence, especially in the development of program analysis techniques for machine learning systems.

EDUCATION University of Virginia, Charlottesville, Virginia USA

Ph.D. Student, Computer Science

• Advisors: Sebastian Elbaum and Matt Dwyer

University of Nebraska-Lincoln, Lincoln, Nebraska USA

M.S., Computer Science, May 2018

• Thesis: "Assessing the Quality and Stability of Recommender Systems"

• Advisor: Sebastian Elbaum

B.S., Computer Engineering, May 2016

Positions Held Research Assistant, August 2018 - Present

Department of Computer Science, University of Virginia

Research Assistant, March 2014 - July 2018

Department of Computer Science and Engineering, University of Nebraska-Lincoln

Publications Conference Publications

Dong Xu, David Shriver, Matthew B. Dwyer, Sebastian Elbaum. 2020. Systematic Generation of Diverse Benchmarks for DNN Verification. In Computer Aided Verification - 32nd International Conference, CAV 2020, Los Angeles, CA, USA, July 21-24, 2020, Proceedings, Part I. 97-121. https://doi.org/10.1007/978-3-030-53288-8_5

David Shriver, Sebastian Elbaum, Matthew B. Dwyer, and David S. Rosenblum. 2019. Evaluating Recommender System Stability with Influence-Guided Fuzzing. In Proceedings of the Thirty-Third AAAI Conference on Artificial Intelligence (AAAI '19). pp 4934-4942. DOI: https://doi.org/10.1609/aaai.v33i01.33014934

David Shriver. 2018. Poster: Toward the development of richer properties for recommender systems. In Proceedings of the 40th International Conference on Software Engineering: Companion Proceedings (ICSE '18). pp 173-174. DOI: https://doi.org/10.1145/3183440.3195082

David Shriver, Sebastian Elbaum, and Kathryn T. Stolee. 2017. At the end of synthesis: narrowing program candidates. In Proceedings of the 39th International Conference on Software Engineering: New Ideas and Emerging Results Track (ICSE-NIER '17). pp 19-22. DOI: https://doi.org/10.1109/ICSE-NIER.2017.7

Upcoming

David Shriver, Sebastian Elbaum, Matthew B. Dwyer. 2021. Reducing DNN Properties to Enable Falsification with Adversarial Attacks. To Appear in ICSE 2021.

HONORS AND University of Nebraska-Lincoln: graduated with Highest Distinction, May 2016

AWARDS UNL CSE Department: Computer Engineering Outstanding Undergraduate Senior, 2016

MEMBERSHIPS AAAI, ACM, IEEE