Jordan **Henkel**

RESEARCHER · SOFTWARE ENGINEER

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Education

University of Wisconsin–Madison	*Madison, WI*
PHD CANDIDATE IN COMPUTER SCIENCES	*Sep. 2018 - Current*

- Cumulative GPA: 3.95

University of Wisconsin–Madison	*Madison, WI*
MASTERS OF COMPUTER SCIENCES	*Sep. 2016 - May 2018*

- Cumulative GPA: 3.93

St. Norbert College	*De Pere, WI*
BACHELOR'S OF ART IN MATHEMATICS AND COMPUTER SCIENCES	*Sep. 2014 - May 2016*

- Cumulative GPA: 4.0
- Attended Sep. 2012 - May 2014 as a Youth Options student while still in High School.

Publications

Refereed Conference & Workshop Papers:

[FSE'2018] **Jordan Henkel**, Shuvendu K. Lahiri, Ben Liblit, and Thomas Reps. 2018. Code Vectors: Understanding Programs Through Embedded Abstracted Symbolic Traces. In *Proceedings of the 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'18), November 4–9, 2018, Lake Buena Vista, FL, USA.* ACM, New York, NY, USA.
`https://pages.cs.wisc.edu/~jjhenkel/research/code-vectors`

[ICSE'2020] **Jordan Henkel**, Christian Bird, Shuvendu K. Lahiri, and Thomas Reps. 2020. Learning from, Understanding, and Supporting DevOps Artifacts for Docker. In Proceedings of the ACM/IEEE 42nd International Conference on Software Engineering (ICSE '20).ACM, New York, NY, USA, 38–49.
`https://pages.cs.wisc.edu/~jjhenkel/research/docker-mining`

[MSR'2020 Data Showcase] **Jordan Henkel**, Christian Bird, Shuvendu K. Lahiri, and Thomas Reps. 2020. A Dataset of Dockerfiles. In Proceedings of the 17th International Conference on Mining Software Repositories (MSR '20). ACM, New York, NY, USA, 528–532.
`https://pages.cs.wisc.edu/~jjhenkel/research/docker-data-showcase`

[ICSE'2021] **Jordan Henkel***, Denini Silva*, Leopoldo Teixeira, Marcelo d'Amorim, and Thomas Reps. Shipwright: A Human-in-the-Loop System for Dockerfile Repair. Proceedings of the 43rd International Conference on Software Engineering. IEEE Press, 1148–1160. *(* equal contributions.)*
`https://pages.cs.wisc.edu/~jjhenkel/research/docker-shipwright`

[SANER'2022] **Jordan Henkel***, Goutham Ramakrishnan*, Zi Wang, Aws Albarghouthi, Somesh Jha, and Thomas Reps. Semantic Robustness of Models of Source Code. *(*equal contributions.)* **[To appear.]**
`https://pages.cs.wisc.edu/~jjhenkel/research/shipwright`

Technical Reports & Works In Submission:

Jordan Henkel, Shuvendu K. Lahiri, Ben Liblit, and Thomas Reps. 2019. Enabling Open-World Specification Mining via Unsupervised Learning. 2019. [Technical Report.]
`https://pages.cs.wisc.edu/~jjhenkel/research/open-world-mining`

Honors & Awards

2021	**Microsoft Research Ph.D. Fellowship,** Microsoft Research	*Redmond, WA*
2020	**Co-PI on accepted $50,000 Grant,** Facebook Probability and Programming RFP	*Bellevue, WA*
2019	**Co-PI on accepted $50,000 Grant,** Facebook Probability and Programming RFP	*Bellevue, WA*
2018	**1st Place Solution,** CodRep: Machine Learning on Code Competition	*Stockholm, Sweden*
2016	**The Math Award,** St. Norbert College	*De Pere, WI*

Volunteering & Service

Microsoft TEALs Volunteer: serving as a remote co-teacher for schools in rural Wisconsin (Shiocton High School 2020–2021, Cambridge High School 2021–2022). Co-teaching a two semester Intro to CS course in Snap! and Python.

Reviewer: Empirical Software Engineering (Journal) in 2019 and 2020.

Presentations

code-book: Data Science on Code

MICROSOFT'S GRAY SYSTEMS LAB   *Remote*   *Aug. 2021*

Shipwright: A Human-in-the-Loop System for Dockerfile Repair

ICSE'2021   *Remote*   *May. 2021*

find-tune: A General Tool for Data Science on Code

GRAMMATECH (INVITED)   *Remote*   *Jan. 2021*

MICROSOFT'S GRAY SYSTEMS LAB   *Remote*   *Aug. 2020*

A Dataset of Dockerfiles

MSR'2020   *Remote*   *Jun. 2020*

Semantic Robustness of Models of Source Code

FACEBOOK (INVITED)   *Remote*   *Apr. 2020*

Learning from, Understanding, and Supporting DevOps Artifacts

ICSE'2020   *Remote*   *Jul. 2020*

MIDWEST PL SUMMIT   *Purdue University, IN*   *Sep. 2019*

MICROSOFT RESEARCH   *Redmond, WA*   *Aug. 2019*

Programs as Differentiable Data Objects

PROBABILITY & PROGRAMMING WORKSHOP (INVITED)   *Bellevue, WA*   *Sep. 2019*

ML on Code: Techniques for Learning from Syntactic and Semantic Representations

KTH STOCKHOLM (INVITED)   *Stockholm, Sweden*   *Nov. 2018*

Code Vectors: Understanding Programs Through Embedded Abstracted Symbolic Traces

ESEC/FSE'2018   *Lake Buena Vista, FL*   *Nov. 2018*

SOURCE{D} (INVITED)   *Remote*   *Oct. 2018*

MIDWEST PL SUMMIT   *Madison, WI*   *Oct. 2018*

Work Experience

Microsoft's Gray Systems Lab   *Madison, WI*

RESEARCH ENGINEER   *Aug. 2022*

- Accepted a post-graduation offer to join Microsoft in an applied science role.

Microsoft's Gray Systems Lab   *Madison, WI*

RESEARCH INTERN   *Jun. - Aug. 2020 & 2021*

- Research Intern in the Gray Systems Lab working on "data science" tools for understanding and analyzing programs at scale.

University of Wisconsin–Madison   *Madison, WI*

RESEARCH ASSISTANT   *Aug. 2016 - Current*

- Advised by Dr. Thomas Reps.

Microsoft Research   *Redmond, WA*

RESEARCH INTERN   *May 2019 - Aug. 2019*

- Research Intern in the Research in Software Engineering (RiSE) group mentored by Christian Bird and Shuvendu Lahiri.

WEC/Integrys Energy Group   *Milwaukee, WI*

PROGRAMMER ANALYST INTERN/CO-OP   *May 2014 - Aug. 2016*

- The only intern (from the acquired company) to survive the acquisition due to the business value and impact of my projects.