Rohan Yadav

Education

2020–Present **Ph.D. in Computer Science**, *Stanford University*, Stanford, CA.

2015–2019 **BS in Computer Science**, *Carnegie Mellon University*, Pittsburgh, PA.
Minor in Machine Learning
Dean's List, University and SCS College Honors
Selected Coursework: Algorithm Design and Analysis, Parallel Computer Architecture, Compiler Design, Optimizing Compilers for Modern Architectures, Complexity Theory, Distributed Systems, Programming Language Theory, Algorithms in the Real World, Reinforcement Learning

Experience

2019-2020 **Software Engineer**, *Cockroach Labs*, New York, NY.
- Development on CockroachDB's distributed SQL engine and schema management infrastructure
- Contributed to development of a variety of large features in CockroachDB including ENUM types, User Defined Schemas, and Online Primary Key Changes
- Improved stability and performance of CockroachDB's SQL engine

2019 **Software Engineering Intern**, *Cockroach Labs*, New York, NY.
- Development on CockroachDB's distributed SQL execution engine
- Implemented new SQL operators for the row-by-row and vectorized execution engine

2018 **Software Engineering Intern**, *Uber Advanced Technologies Group*, San Francisco, CA.
- Developed infrastructure for a migration from an internal data center to AWS
- Implemented a file access system within AWS for integration with existing data center services
- Dramatically enhanced scalability of batch compute jobs processing internal data

2017 **Software Engineering Intern**, *Facebook*, Menlo Park, CA.
- Developed system to perform disruptive upgrades on network switches
- Added packet subscription service for network switch agent debugging and maintenance
- Added various debugging features for engineers on the network infrastructure team

Skills C, C++, Standard ML, OCaml, Python, CUDA, Go, Git, X86 Assembly, AWS, Java

Research and Teaching

Parallel Computing
- I am interested in research in the scope of parallel computing, including algorithms, language design and implementation, and systems.
- I worked on parallel algorithms and parallel programming languages in my undergraduate, advised by Umut Acar.

Teaching
- Head Teaching Assistant (2017-2018). Parallel Algorithms and Data Structures
- Teaching Assistant (2016). Principles of Functional Programming

Diderot
- Develop and maintain a new educational platform at CMU, used by 1500 students daily
- Implemented a cloud based auto-grading system for student code

Publications

rohany@alumni.cmu.edu • *rohany.github.io*

POPL 2020 **Disentanglement in Race-Free Nested Parallel Programs** *Sam Westrick, Rohan Yadav, Matthew Fluet, Umut A. Acar*

Undergraduate Thesis **Disentanglement, Theory and Practice** *Rohan Yadav*

SPAA 2019 **Brief Announcement: A Parallel Algorithm for Subgraph Isomorphism** *Rohan Yadav, Umut A. Acar*

Talks

On the Automated Mapping of Computation and Data Onto Heterogenous Machines

- Stanford Software Research Lunch, Feb 2021
- Legion Developer Meeting, Jan 2021

A Parallel Algorithm for Subgraph Isomorphism

- SPAA 2019, Jun 2019

Disentanglement, Theory and Practice *Pittsburgh, Pennsylvania*

- CMU Meeting of the Minds, May 2019

Awards

- 2020 NSF Graduate Research Fellowship
- CRA Outstanding Undergraduate Researcher Nominee
- Carnegie Mellon Senior Leadership Recognition
- Presidential Scholar Semifinalist

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