

Aviral Goel

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Research Interests

Areas Programming Languages • Software Engineering • Computer Systems • Compilers
Techniques Empirical Evaluation • Dynamic Analysis • Static Analysis

Software Skills

Languages R • C/C++ • Python • Racket
Tools Linux • Git

Education

- '17–Present **Ph.D**, Computer Science *Advised by Dr. Jan Vitek.*
Northeastern University, Boston, USA
- '16–'17 **M.S**, Computer Science GPA–4.0/4.0.
Northeastern University, Boston, USA
- '08–'12 **B.E**, Electronics and Communication Engineering 81%–First Class with Distinction.
Netaji Subhas Institute of Technology, New Delhi, India

Industry Experience

- May–Aug'19 **Oracle Austria GmbH, Linz, Austria.**
Research Assistant
- Feb–Dec'15 **Institute for Stem Cell Biology and Regenerative Medicine, Bengaluru, India.**
Technology Manager
- Sep'13–Feb'15 **National Center for Biological Sciences, Bengaluru, India.**
Programmer
- July'12–Aug'13 **Yahoo!, Bengaluru, India.**
Software Engineer
- Jun–July'10 **Siemens Limited, New Delhi, India.**
Intern

Teaching Experience

- Fall'18 **Intensive Principles of Programming Languages, CS7400.**
Ph.D. Teaching Assistant at Northeastern University
- Fall'17 **Parallel Data Processing in Map Reduce, CS6240.**
M.S. Teaching Assistant at Northeastern University
- Spring'17 **Introduction to Data Management and Processing, DS5110.**
M.S. Teaching Assistant at Northeastern University
- Summer'16 **Algorithms and Data, CS4800.**
B.S. Teaching Assistant at Northeastern University



Publications

OOPSLA'20 **Designing Types for R, Empirically.**

Virtual Alexi Turcotte • **Aviral Goel** • Filip Křikava • Jan Vitek

 [10.5281/zenodo.4037278](https://zenodo.org/record/4037278)



OOPSLA'19 **On The Design, Implementation, and Use of Laziness in R.**

Athens • Greece **Aviral Goel** • Jan Vitek

 [10.1145/3360579](https://doi.org/10.1145/3360579)

 [10.5281/zenodo.3369573](https://zenodo.org/record/3369573)



POPL'18 **Correctness of Speculative Optimizations with Dynamic Deoptimization.**

California • USA Olivier Flückiger • Gabriel Scherer • Ming-Ho Yee • **Aviral Goel** • Amal Ahmed • Jan Vitek

 [10.1145/3158137](https://doi.org/10.1145/3158137)

IGI Global **De-Noising, Clustering, Classification, and Representation of Microarray Data for Disease Diagnostics**, *Research Developments in Computer Vision and Image Processing: Methodologies and Applications*.

ISBN: 146664558X Nitin Baharadwaj • Sheena Wadhwa • Pragya Goel • Isha Sethi • Chanpreet Singh Arora **Aviral Goel** • Sonika Bhatnagar • Harish Parthasarathy

 [10.4018/978-1-4666-4558-5.ch009](https://doi.org/10.4018/978-1-4666-4558-5.ch009)

Conference Talks

PL DAY'19 **On The Design, Implementation, and Use of Laziness in R.**

IBM • NY • USA

OOPSLA'19 **On The Design, Implementation, and Use of Laziness in R.**

Athens • Greece  <https://youtu.be/qLxz9HPP6wI>

META'19 **Meta-Programming in Data Science**

Athens • Greece

Keynote.

RIOT'19 **RDT: A Dynamic Tracing Framework for R.**

Toulouse • France

Invited Talks

2020 **On The Design, Implementation, and Use of Laziness in R.**

Harvard University, USA

Carnegie Mellon University, USA

Cornell University, USA

University of California San Diego, USA

University of Maryland, USA

University of California Riverside, USA

University of Utah, USA

National University of Singapore, Singapore

Rutgers University, USA

University of Colorado Boulder, USA

Northwestern University, USA

Service

REBASE'20 **Organizer.**

OOPSLA'20 **Artifact Evaluation Committee.**

REBASE'19 **Session Chair.**

SPLASH'19 **Web Chair.**

SPLASH'18 **Web Chair.**

Languages

Hindi Native/Bilingual Proficiency

English Full Professional Proficiency

