

# Hrishikesh Kulkarni

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Google Scholar

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## EDUCATION

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- **Georgetown University** Washington DC, USA  
*M.S. + Ph.D. - Computer Science* 2020 - Present
- **Savitribai Phule Pune University** PVGCOET, Pune MH, India  
*B.E. - Computer Engineering* 2016 - 2020

## RESEARCH EXPERIENCE

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- **Lowe's Companies Inc.** Charlotte NC, USA  
*Data Science Intern (Mentor: Dr. S. Kallumadi)* May 2024 - Aug 2024
- **Georgetown University** Washington DC, USA  
*Research Assistant (C.S. Dept)* Aug 2020 - Present
- **National Insurance Academy** Pune MH, India  
*Research Intern (Mentor: Dr. S. Page)* Jun 2019 - Aug 2019
- **iKnowlation Research Labs** Pune MH, India  
*Research Intern (Mentor: Dr. P. Chande)* Jul 2017 - Dec 2017

## TEACHING EXPERIENCE

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- **Information Retrieval (COSC-488)** Georgetown University  
*Teaching Assistant (Professor: Dr. Nazli Goharian)* Aug 2022 - Dec 2022
- **Introduction to DBMS (COSC-280)** Georgetown University  
*Teaching Assistant (Professor: Dr. Nazli Goharian)* Aug 2022 - Dec 2022
- **Data Mining (COSC-285)** Georgetown University  
*Teaching Assistant (Professor: Dr. Nazli Goharian)* Aug 2021 - Dec 2021
- **Open Source Club** Pune MH, India  
*Founder and Mentor* Aug 2018 - May 2020

## OTHER EXPERIENCE

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- **Google Summer of Code - GNU Compiler Collection (GCC)** Remote  
*Summer Intern (Mentors: Martin Liska, Jan Hubicka)* May 2018 - Aug 2018
- **Kaizen Infosys** Pune MH, India  
*Summer Intern (Mentor: Nenadd Chandorkar)* May 2017 - Jul 2017

## SELECTED PUBLICATIONS

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- **LexBoost: Improving Lexical Document Retrieval with Nearest Neighbors:**  
Hrishikesh Kulkarni, Nazli Goharian, Ophir Frieder, Sean MacAvaney  
DocEng 2024
- **Genetic Approach to Mitigate Hallucination in Generative IR:**  
Hrishikesh Kulkarni, Nazli Goharian, Ophir Frieder, Sean MacAvaney  
SIGIR Gen-IR 2024
- **Genetic Generative Information Retrieval:**  
Hrishikesh Kulkarni, Zachary Young, Nazli Goharian, Ophir Frieder, Sean MacAvaney  
DocEng 2023
- **Lexically-Accelerated Dense Retrieval:**  
Hrishikesh Kulkarni, Sean MacAvaney, Nazli Goharian, Ophir Frieder  
SIGIR 2023
- **Knowledge Augmentation for Early Depression Detection:**  
Hrishikesh Kulkarni, Sean MacAvaney, Nazli Goharian, Ophir Frieder  
AAAI W3PHIAI 2023
- **TBD3: A Thresholding-Based Dynamic Depression Detection from Social Media for Low-Resource Users:**  
Hrishikesh Kulkarni, Sean MacAvaney, Nazli Goharian, Ophir Frieder  
LREC 2022
- **High-Quality Dialogue Diversification by Intermittent Short Extension Ensembles:**  
Zhiwen Tang, Hrishikesh Kulkarni, Grace Hui Yang  
ACL Findings 2022
- **Sentiment Progression Based Searching and Indexing of Literary Textual Artefacts:**  
Hrishikesh Kulkarni, Bradly Alicea  
Springer NLDB 2021

- **Pivot Point Based Intelligent System to Associate Creative Textual Artefacts:**  
Hrishikesh Kulkarni, Bradly Alicea  
Springer IEA/AIE 2021
- **Cultural, Emotional, and Associative Traits to Determine Literary Inclination:**  
Hrishikesh Kulkarni, Bradly Alicea  
PsyArXiv 2020
- **Context vector convergence of computational behaviour and cultural traits for team selection:**  
Hrishikesh Kulkarni, Manisha Marathe  
Inderscience Journal IDIDS 2021
- **Computational Psychology to Embed Emotions into Advertisements to Develop Emotional Bonding:**  
Hrishikesh Kulkarni, Prachi Joshi, PK Chande  
Indian Journal of Psychological Science 2019
- **Personalized Newspaper Based on Emotional Traits Using Machine Learning:**  
Hrishikesh Kulkarni, Tejas Joshi, Nikhil Sanap, Rohan Kalyanpur, Manisha Marathe  
IEEE ICCUBEA 2019
- **Cultural Association Based on Machine Learning for Team Formation:**  
Hrishikesh Kulkarni, Bradly Alicea  
IEEE ICCUBEA 2019
- **Machine Learning Based Cultural Suitability Index (CSI) for Right Task Allocation:**  
Hrishikesh Kulkarni, Manisha Marathe  
IEEE ICECCT 2019
- **Multi-Agent System for Customer Behavior Tracking Using Shoppers Path Traversal:**  
Hrishikesh Kulkarni, P Patil, R Menon  
IEEE ICECCT 2019
- **Computational Psychology to Embed Emotions into Product to Increase Customer Affinity:**  
Hrishikesh Kulkarni, Prachi Joshi, Pradip Chande  
Springer ICICCT 2019
- **Cultural Affinity through Associative Machine Learning and Behavioral Computation:**  
Hrishikesh Kulkarni, Bradly Alicea  
NAPS IPC 2018
- **Computational Psychology to Embed Emotions into News or Advertisements to Increase Reader Affinity:**  
Hrishikesh Kulkarni, Prachi Joshi, Pradip Chande  
NAPS IPC 2018
- **Multi-Graph based Intent Hierarchy Generation to Determine Action Sequence:**  
Hrishikesh Kulkarni  
Springer ICDECT 2017
- **Thought Process based Team Member Selection Using Contextual Sentiment Closeness:**  
Hrishikesh Kulkarni  
IEEE I2CT 2017
- **Intent Action Ontology and Tone Matching Algorithm for Organizing News Articles:**  
Hrishikesh Kulkarni  
IEEE ICECDS 2017
- **Intelligent Context Based Prediction using Probabilistic Intent-Action Ontology and Tone Matching Algorithm:**  
Hrishikesh Kulkarni  
IEEE ICACCI 2017
- **Contextual Data Representation Using Prime Number Route Mapping Method and Ontology:**  
Hrishikesh Kulkarni  
IEEE ICCUBEA 2017

## PATENTS

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- **WO2019026087 - An intelligent context based prediction system:**  
Hrishikesh Kulkarni  
WIPO (Indian Patent) 2017

## HONORS AND AWARDS

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- NSF Student Travel Grant for Generative AI Workshop at Microsoft Research 2023
- ACM SIGIR 2023 Student Travel Grant
- Merit-based Graduate School full tuition scholarship and research assistantship stipend award for 5 years - Georgetown University 2020
- Best Outgoing Student Award: Computer Engineering, PVGCOET, SPPU, Pune 2019-2020
- Best Paper Award: Hrishikesh Kulkarni, Bradly Alicea, "Cultural Association Based on Machine Learning for Team Formation", IEEE ICCUBEA 2019

- Best Paper Award: Hrishikesh Kulkarni, “Contextual Data Representation Using Prime Number Route Mapping Method and Ontology”, IEEE ICCUBEA 2017
- Only candidate selected by GNU Compiler Collection (GCC) for Google Summer of Code (GSOC) 2018
- Founded Open Source Club at PVGCOET Pune 2018
- Student representative for IQAC (Internal Quality Assurance Cell) PVGCOET 2018-2020 (out of 1200 students)
- PVG Merit Award: First admission award - 2016 (out of 500 students)
- Stood Sixth in High School Scholarship - 2011 (out of 30000 students)

## SKILLS

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- Highly proficient in Python, TensorFlow, PyTorch and also worked on projects in C, C++, Java and R

## LANGUAGE PROFICIENCY

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- Native/Bilingual proficiency (read, write and speak) in English, Marathi and Hindi