

# Sharad Shriram

✉ sharadshriram01@gmail.com | 🏠 sharadshriram.github.io | 📧 sharadshriram | 🌐 sharadshriram | 🎓 Google Scholar

## Summary

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- Software Engineer with 6 years of experience applying cutting-edge ML models (including LLMs) to solve real-world problems.
- Passionate about integrating software engineering best practices for efficiency.
- Research interests include applied Machine Learning/ Natural Language Processing (NLP), Software Architecture and Infrastructure for Generative AI applications.

## Work Experience

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### Google Research India

Bangalore, India

Pre Doctoral Researcher

Jul. 2022 - Present

- **Generating intermediate representations for text** - Developing factual intermediate representations for text-style transfer using large language models (LLMs). Employing prompting (including chain-of-thought), bulk inference pipelines, fine-tuning (supervised and LoRA), and qualitative analysis
- **Applied ML application on data visualizations** - Developed a conversational interface over data visualizations using a vision-language model and large language model. Prioritized accessibility-focused design for diverse user needs

### Google through Optimum Infosystems

Bangalore, India

Data Commons Associate

Aug. 2021 - Jun. 2022

- Expanded data coverage for [Google's Data Commons](#) open knowledge graph project.
- Designed new schema for diverse public statistical datasets within the Data Commons project.
- Developed data processing workflows for ingesting statistical datasets (including census data) into the Data Commons platform.

### Centre for Networked Intelligence, Indian Institute of Science

Bangalore, India

Technical Associate

Dec. 2019 - Jul. 2021

- Led architecture and development of COVID-19 response projects: [serosurvey optimization](#) & [agent-based model as a service](#).
- Contributed to [COVID-19 response projects](#) that were published in [AAMAS 2021](#); [Journ. of IISc., 2020](#); [Sankhya B, 2020](#).
- Researched software architectures for online networking courses; presented at [ACM SIGCOMM Online Networking Education Discussion Workshop, 2020](#).

### IBM Netherlands

Amsterdam, the Netherlands

Extreme Blue Intern

May. 2018 - Aug. 2018

- Led development of an AI/data-driven prototype for supply chain analysis at a top Food & Beverage company.

## Education

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### Delft University of Technology (TU Delft)

Delft, the Netherlands

M.S. (by Research) in Computer Science

Sep. 2017 - Aug. 2019

- Courses: Software Architecture, Pattern Recognition, Information Retrieval, Web Data Management, Web Science and Engineering.
- Thesis: ["A Human-Machine Approach to Preserve Privacy in Image Analysis Crowdsourcing Tasks"](#).
- Advisor: Prof. Alessandro Bozzon
- Teaching and Lab Assistant for graduate and undergraduate CS course.

### Amrita Vishwa Vidyapeetham (Amrita University)

Coimbatore, India

B.Tech. in Computer Science and Engineering

Aug. 2012 - May. 2016

- Undergraduate Student Researcher in Mobile and Wireless Networks lab.

## Highlights

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- Recognized for cross-functional collaboration with multiple Google internal awards (peer and spot bonuses).
- Runners-up for *Project with the best innovation impact*, IBM Extreme Blue European Expo, 2018.
- *IBM Benelux Excellence Award* for work done during the Extreme Blue internship, 2018.

## Skills

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<b>Programming Languages</b>	Python, C++, JavaScript, Java.
<b>Data and ETL pipelines</b>	Pandas, Apache Beam, Tensorflow datasets, SQL, R, scipy
<b>ML/NLP Frameworks</b>	Tensorflow, HuggingFace, PyTorch, numpy
<b>Web Frameworks</b>	Django, Flask, Angular, nginx, PHP

## Selected Publications

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- A Talekar, **Shriram, S**, N Vaidhiyan, G Aggarwal, J Chen, S Venkatramanan, L Wang, A Adiga, A Sadilek, A Tendulkar, M Marathe, R Sundaresan, and M Tambe. [Cohorting to Isolate Asymptomatic Spreaders: An Agent-Based Simulation Study on the Mumbai Suburban Railway](#). *Proceedings of the 20th International Conference on Autonomous Agents and MultiAgent Systems*, pages 1680–1682, 2021.
- S Athreya, G R Babu, A Iyer, M M B S, N Rathod, **Shriram, S**, R Sundaresan, N Vaidhiyan, and S Yasodharan. [COVID-19: Optimal Design of Serosurveys for Disease Burden Estimation](#). *Sankhya B*, pages 1–23, 2020.
- **Sharad, S\***, P B Sivakumar, and V Anantha Narayanan. [The smart bus for a smart city—A real-time implementation](#). In *2016 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, pages 1–6. IEEE, 2016.
- **Sharad, S\***, P B Sivakumar, and V Ananthanarayanan. [An automated system to mitigate loss of life at unmanned level crossings](#). *Procedia computer science*, 92:404–409, 2016.
- P Parag, P Patil, **S Shriram**, R Sundaresan, H Tyagi, and N K Vaidhiyan. [Antidote for CoVID-19 pandemic induced surge in online learning](#), 2020.

## References

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- Prof. Rajesh Sundaresan (Professor, ECE, Indian Institute of Science (IISc), Bangalore), [rajeshs@iisc.ac.in](mailto:rajeshs@iisc.ac.in).
- Dr. Aravindan Raghuv eer (Principal Software Engineer, Google Research India), [araghuv eer@google.com](mailto:araghuv eer@google.com).
- Mr. Ajai Tirumali (Senior Software Engineer, Google), [ajaits@google.com](mailto:ajaits@google.com).