

Monisha Jegadeesan

SENIOR SOFTWARE ENGINEER, GOOGLE

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Education

2015-2020 **Dual Degree (B.Tech + M.Tech) in Computer Science and Engineering**
Indian Institute of Technology Madras, Chennai, India

CGPA: 8.78

Professional Experience

Dec 2024 - **Senior Software Engineer, Google LLC, New York**

Present Skills: Java, Javascript, Chrome Performance Tooling, A/B Experimentation

- Driving infrastructure and analysis for evaluation and roll-out of new not-yet-validated client infrastructure to improve the speed of user operations as well as overall performance, with the goal of making sheets more scalable.
- Core contributor to the reliability efforts in the Google Sheets' desktop app focusing on data compression infrastructure and storage optimizations to reduce crash rates in large sheets by reducing memory consumption.

Dec 2022 - **Software Engineer (Level 4); Senior Software Engineer from May 2024, Google LLC, New York**

Nov 2024 Skills: Java, Android Development, Multithreading

- Drove Android client infrastructure efforts in the Google Keep note-taking app for optimal background generation of metadata to power core functionalities and standardized various metadata generation pathways.
- Integrated functionality to sync data between the client and server for a new type of note in Google Keep, along with local and server support for media storage and transfer between client and server.

Aug 2020 - **Software Engineer (Level 3); Software Engineer (Level 4) from Oct 2021, Google India, Bangalore**

Nov 2022 Skills: C++, Java, Javascript, Closure, WebAssembly, Chrome Debugging Tooling, Source Maps, Deep Neural Models

- Developed intelligence features for the Google Workspace Editors (Docs, Slides, etc) with expertise on the products' client-side software, supporting tools and libraries, and natural language processing infrastructure.
- Developed base infrastructure for user-facing features such as multi-language spellcheck in encrypted documents by integrating an on-device spelling model with minimal overhead, and writing style suggestions for English text.

May 2019 - **Software Engineering Intern, Google India Pvt Ltd, Bangalore**

July 2019 Skills: C++, Java, Javascript, Closure, WebAssembly, Chrome Debugging Tooling, Source Maps, Deep Neural Models

Built the user interface - underline, and control options to undo or provide feedback on the correction, and a logging framework, for the Google Docs text auto-correction feature, leveraging the existing client software system.

May 2018 - **Research Intern, Big Data Experience Labs, Adobe Research, Bangalore**

July 2018 Skills: Java, Javascript, Closure, Webapp testing and debugging

Developed a mobile application for Text to Scene Conversion in Augmented Reality, based on novel research techniques in neural networks, for the prediction of three-dimensional object sizes and positions from textual features.

Research Experience

Sep 2019 - **Paraphrase Generation with a Bilingual Model and Continuous Embeddings**

May 2020 **Master's Thesis, Language Technologies Institute, Carnegie Mellon University**

Machinated a novel technique for paraphrase generation using the von Mises-Fisher (vMF) Loss on a transformer network with bilingual data for zero-shot paraphrasing, superior to that of the log-likelihood model. Guided by Prof. Yulia Tsvetkov.

Publications and Patents

[Publication and Poster] **Improving the Diversity of Unsupervised Paraphrasing with Embedding Outputs (Paper, Poster)**

Monisha Jegadeesan, Sachin Kumar, John Wieting, Yulia Tsvetkov

In **Workshop on Multilingual Representation Learning**,

The 2021 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2021**)

[Publication and Poster] **Adversarial Demotion of Gender Bias in Natural Language Generation (Paper, Poster)**

Monisha Jegadeesan

In **ACM CODS-COMAD 2020** - Young Researchers' Symposium

[Poster and Filed Patent] **ARComposer: Authoring Augmented Reality Experiences through Text (Poster)**

Sumit Kumar, Paridhi Maheshwari, Monisha Jegadeesan, Amrit Singh, Kush Kumar Singh, Kundan Krishna

In ACM User Interface Software and Technology Symposium 2019 (**ACM UIST 2019**)

[Publication and Poster] **Leveraging Ontological Knowledge for Neural Language Models (Paper, Poster)**

Ameet Deshpande, Monisha Jegadeesan

In **ACM CODS-COMAD 2019** - Young Researchers' Symposium