

SAUMYA YASHMOHINI SAHAI

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Research Interests

Broadly interested in applied machine learning for natural language processing, particularly in generative and understanding tasks with applications in contextualization, dialogue and efficiency.

Experience

- Amazon.com AGI** | *Applied Scientist* | Pittsburgh, PA Feb 2022 – Present
Working on generative contextual modeling using large language models for improving automatic speech and intent recognition on cloud and edge models.
- Spotify Inc.** | *Machine Learning Intern* | Remote, USA May 2021 – Aug 2021
Working with Language Technologies team on improving voice recognition through personalization.
- INRIA, Cedar Team** | *Research Intern in NLP* | Remote, France May 2020 – Aug 2020
Built a new dataset and neural models for understanding discourse in online discussions. Accepted at ACL 2021.
- Cornell University** | *Graduate Research Assistant* | Ithaca, NY Aug 2016 – May 2019
Modeled trajectories and feeding behavior of fruit flies using reinforcement learning under various behavioral states.
- Adobe Systems** | *Product Development Intern* | Noida, India Jan 2016 – Jun 2016
Implemented a 2-way and 3-way diff and merge algorithm in C++ for reimplemented text in Adobe InDesign.
- Queensland Brain Institute** | *Research Intern* | Brisbane, Australia May 2015 – Jul 2015
Developed models to explain the neuronal activity patterns in the brain of an organism.

Education

- The Ohio State University** Jun 2019 – Dec 2021
Master of Science in Computer Science, 3.9/4.0 Columbus, OH
- Cornell University** Aug 2016 – May 2019
Master of Science in Neurobiology and Behavior, 3.9/4.0 Ithaca, NY
- Birla Institute of Technology and Science, Pilani** Aug 2011 – Jul 2016
Bachelor of Engineering in Computer Science and Master of Science in Physics, 9.2/10.0 Pilani, India

Technical Skills

Proficient: Python, PyTorch, Tensorflow, Keras, Spark, Scikit-learn, Linux, Git, Amazon SageMaker
Experienced: Java, SQL, R, C++, Javascript, Kubeflow, Google Cloud Platform

Select Publications

- **Saumya Y. Sahai**, Liu J., Muniyappa T. et al. *Dual-attention Neural Transducers for Efficient Wake Word Spotting in Speech Recognition*. IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2023**)
- **Saumya Y. Sahai**, Balalau O., Horincar R. *Breaking Down the Invisible Wall of Informal Fallacies in Online Discussions*. Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (**ACL 2021**)
- Dravyansh Sharma, **Sahai S. Y.**, Chaudhari N., Bruguier A. *Improved pronunciation prediction accuracy using morphology*. The ACL Special Interest Group on Computational Morphology and Phonology (**ACL 2021**)
- **Saumya Y. Sahai***, Sharma D.* *Predicting and Explaining French Grammatical Gender*. The ACL Special Interest Group on Typology (**NAACL 2021**) (* denotes equal contribution)
- **Saumya Y. Sahai**, Gurukar, S., KhudaBukhsh, W. R., Parthasarathy, S., Rempala, G. *A Machine Learning Model for Nowcasting Epidemic Incidence*. (**Journal of Mathematical Biosciences, 2021**)
- Bortik Bandyopadhyay, Maneriker, P., Patel, V., **Sahai, S. Y.**, Zhang, P., Parthasarathy, S. *DrugDBEmbed: Semantic Queries on Relational Database using Supervised Column Encodings*. arXiv:2007.02384 (2020)
- Samuel Whitehead, Shirangi T., Lindsay T., **Sahai S. Y.**, Ehrhardt E., Beatus T., Yapici N., Dickinson M., Stern D., Cohen I. *Uncovering the Neural Basis of Flight Control in Fruit Flies*. March Meeting 2018, **American Physical Society**

Awards and Honours

- Global Gateway Graduate Research Abroad Grant | *Council of Graduate Students, The Ohio State University* 2020
- University Fellowship | *The Graduate School, The Ohio State University* 2019
- Mong Junior Fellowship | *Cornell Neurotech, Cornell University* 2018
- Cornell Graduate Fellowship | *The Graduate School, Cornell University* 2016
- INSPIRE Fellowship | *Department of Science and Technology, Govt. of India* 2011