Aditi Seshadri

Education

Cornell University	Ithaca, NY
PhD in Chemical Engineering	*August 2023 - present*

University of Rochester	Rochester, NY
Bachelor of Science in Chemical Engineering	*May 2022*

o **Minor:** Computer Science, **Cluster:** Linguistics

Honors and Awards

University of Rochester

o Cum Laude & High Distinction in Chemical Engineering	
o Meliora Alumni Scholarship and New York State Merit Scholarship	*2018 - 2022*
o Dean's List	*2018 - 2021*
o Patrick P. Lee Foundation Scholarship	*2020 - 2022*
o Tau Beta Pi Engineering Honor Society	*Fall 2021 - present*
o Discover Grant, University of Rochester	*Summer 2021*

Programming Skills

o Python, Java, C, R, LabVIEW, MATLAB
o Relevant AI/ML Courses: Introduction to Statistical Machine Learning, Introduction to Artificial Intelligence

Research Experiences

Project Assistant, University of Rochester	*Fall 2022*

o Exploring Molecular Structure-Odor Relationships with Explainable AI (Advisor: Dr. Andrew White)

Independent Research, University of Rochester	*Fall 2021 - Spring 2022*

o Examining the Use of Counterfactuals and Descriptor Explanations in Scent Prediction (Advisor: Dr. Andrew White)

Summer Research, University of Rochester	*Summer 2021*

o Predicting Molecular Scent with Graph Neural Networks and Counterfactuals (Advisors: Dr. Andrew White and Dr. Ignacio Franco)

Independent Research Project, Allendale Columbia School	*2017 - 2018*

o Chemical Cytotoxicity Research using Machine Learning Techniques (Advisors: Dr. Jeffrey Lawlis and Dr. David Giacherio)

Summer Internship, Perception For Movement (PerForM) Lab, Rochester Institute of Technology	*Summer 2017*

o Eye Tracking and Machine Vision Research (Advisor: Dr. Gabriel Diaz)

Summer Internship, Department of Chemistry, Nazareth College	*Summer 2016*

o Algal Bloom Research of Waters in the Lower Genesee Watershed (Advisors: Dr. David Giacherio and Dr. Padmini Das)

Publications and Preprints

o Wellawatte, G. P., **Seshadri, A.**, & White, A. D. (2022). Model agnostic generation of counterfactual explanations for molecules. *Chemical Science*, *13*(13), 3697-3705.

o Wellawatte, G. P., Gandhi, H. A., **Seshadri, A.**, & White, A. D. (2023). A Perspective on Explanations of Molecular Prediction Models. *Journal of Chemical Theory and Computation*, *19*(8), 2149-2160.

o **Seshadri, A.**, Gandhi, H., Wellawatte, G., & White, A. (2022). Why does that molecule smell? *ChemRxiv*. doi:10.26434/chemrxiv-2022-vs838 This content is a preprint and has not been peer-reviewed.

Professional Activities

American Institute of Chemical Engineers, University of Rochester	*2019 - 2022*
Engineers for a Sustainable World Club, University of Rochester	*2019 - 2022*
o XPRIZE Carbon Removal Student Competition (Team Meliora Emissions, University of Rochester)	*2021*
o US Department of Energy Solar Decathlon Design Challenge (University of Rochester Team)	*2020 - 2021*
Toy Adaptation Program, University of Rochester	*2019 - 2020*