Aayush Yadav

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Education

2021 - present	Doctor of Philosophy in Computer Science, **George Mason University**
2019 - 2021	Master of Science in Computer Science, **Rutgers University** *Thesis with distinction* Thesis: "Stochastic Maze Solving Under the Geometric Amoebot Model"
2013 - 2017	Bachelor of Engineering in Computer Science and Engineering , **University of Pune** *First class with distinction* Senior Project: "Camera2Caption: A Real-time Image Caption Generator" Awarded best senior project at AIT-UGCON 2017

Research Experience

Nov 2019 - Jun 2021	Graduate Research Assistant, **Sen. Walter Rand Institute for Public Affairs** ▷ Designed probabilistic model(s) to generate actionable insights into community health outcomes data. ▷ Assessed shortfalls in the South Jersey healthcare system during the COVID-19 pandemic[↗]
May 2020 - Sep 2020	Research Assistant (Summer), **Rutgers University** Researched stochastic algorithms for self-organizing particle systems model of distributed computing (continued work).
Aug 2017 - May 2018	Research Intern, **Indian Institute of Technology, Delhi** Studied the generalisation properties of deep neural networks.

Industry Experience

Jul 2018 - Jun 2019	Data Scientist, **ParallelDots, Inc.** ▷ Wrote predictive models for market research using Bayesian machine learning. ▷ Worked on transfer learning in language modeling and memory efficient deep learning.
Jun 2016 - Aug 2016	Data Science Intern, **Edelweiss Financial Services** Designed and developed a model to predict propensity of claims in new insurance policies for the Risk Analytics team at Edelweiss-Tokio Life Insurance.

Teaching Experience

Fall '20, Spring '21	Teaching Assistant, **CS-111: Programming Fundamentals** ▷ Designed and taught remote laboratory instructions. ▷ Created laboratory assignments and graded student submissions.
Fall '21	Teaching Assistant (awaiting assignment)

Research Highlights

Stochastic Maze Solving Under the Geometric Amoebot Model[↗]

2021   *Master's thesis*

Municipality-level case rates reveal locality-based differences in COVID impact

2021   *Manuscript submitted*

Camera2Caption: A Real-Time Image Caption Generator[↗]

2017   *IEEE International Conference on Computational Intelligence in Data Science*

Software Highlights

Pymoebots   Stochastic Algorithms Simulator for the Amoebot Model[↗]
          python, django, javascript

FitFast   Quickly fine-tune language models for your downstream NLP tasks[↗]
          python, pytorch

Retrogram   Retrofitted (domain-adapted) word vectors with Word2Vec skip-gram model[↗]
          python, tensorflow

Camera2Caption   A Real-time Image Caption Generator[↗]
          python, tensorflow

[more on github ↗]

Outreach & Miscellanea

Apr 2020 - present   Volunteer, **The Carpentries**

Dec 2020 - Jun 2021   Volunteer, **Mighty Writers**

References

Dr. Sunil Shende[↗], Dr. Sarah Allred[↗]