Aayush Yadav

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website

Education

Rutgers University – Camden • *Master of Science*
AUG 2019 - MAY 2021

Studying Computer Science with a concentration in Scientific Computing.

GPA: 4/4

University of Pune • *Bachelor of Engineering*
JUN 2013 - JUL 2017

Studied Computer Science & Engineering at the **Army Institute of Technology**. Graduated with a first class with distinction.

Senior Project: *"Camera2Caption: A Real-time Image Caption Generator"*
Awarded best senior project at AIT-UGCON 2017

Work Experience

Senator Walter Rand Institute for Public Affairs •
Graduate Research Assistant
NOV 2019 - PRESENT, CAMDEN

• Designing probabilistic model(s) to generate actionable insights into community health outcomes data.
• Assessing shortfalls in the South Jersey healthcare system during the COVID-19 pandemic using a combination of epidemiological modeling and optimal control. [1]
• Coordinating efforts and maintaining the codebase for a study on the mortality risks during and following COVID-19.

Rutgers University • *Research Assistant (Summer)*
MAY 2020 - SEP 2020, CAMDEN

Researching stochastic algorithms for self-organizing particle systems model of distributed computing (continued work).

ParallelDots, Inc. • *Associate Data Scientist*
JUL 2018 - JUL 2019, GURGAON

• Wrote predictive models for market research using Bayesian machine learning.
• Worked on transfer learning in language modeling and memory efficient deep learning.

Indian Institute of Technology, Delhi • *Research Intern*
AUG 2017 - MAY 2018, NEW DELHI

Studied the generalisation properties of deep neural networks.

Edelweiss Financial Services • *Data Science Intern*
JUN 2016 - JUL 2016, MUMBAI

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

Rutgers University • *Teaching Assistant*
CS 111: PROGRAMMING FUNDAMENTALS (FALL 2020, SPRING 2021)

· Designing and teaching remote laboratory instructions.
· Creating laboratory assignments and grading student work..

Research

Control of COVID-19 outbreak using an extended SEIR model
Manuscript draft available on request.

Timing County Hospital Bed Shortfall during COVID-19[1]
Reports: Senator Walter Rand Institute for Public Affairs

Regional Health System Shortfalls with a Novel COVID-19 Model[2][3]
Reports: Senator Walter Rand Institute for Public Affairs

Effects of regularization on model complexities of neural networks[4]
M. Sharma, A. Yadav, S. Soman, Jayadeva
arXiv:1901.11458

Camera2Caption: A Real-Time Image Caption Generator[5]
P. Mathur, A. Gill, A. Yadav, A. Mishra, N.K. Bansode
IEEE International Conference on Computational Intelligence in Data Science (ICCIDS 2017)

Software Highlights

Pymoebots: **Stochastic Algorithms simulator for the Amoebot Model**[6]
PYTHON, DJANGO, JAVASCRIPT

FitFast: **Quickly fine-tune language models for your downstream NLP tasks**[7]
PYTHON, PYTORCH

Retrogram: **Retrofitted (domain-adapted) word vectors with Word2Vec skip-gram model**[8]
PYTHON, TENSORFLOW

Camera2Caption: **A Real-time Image Caption Generator**[9]
PYTHON, TENSORFLOW

[more on github]

Outreach & Miscellanea

The Carpentries • *Instructor*
APR 2020 - PRESENT

Teach for India • *Education Volunteer*
JUL 2017 - SEP 2017