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## Education

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### **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

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## Work Experience

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### **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. <sup>[1]</sup>
- 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*.

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## Teaching

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### 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..

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## Research

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### Control of COVID-19 outbreak using an extended SEIR model

Manuscript draft available on request.

### Timing County Hospital Bed Shortfall during COVID-19<sup>[1]</sup>

Reports: Senator Walter Rand Institute for Public Affairs

### Regional Health System Shortfalls with a Novel COVID-19 Model<sup>[2][3]</sup>

Reports: Senator Walter Rand Institute for Public Affairs

### Effects of regularization on model complexities of neural networks<sup>[4]</sup>

M. Sharma, A. Yadav, S. Soman, Jayadeva

arXiv:1901.11458

### Camera2Caption: A Real-Time Image Caption Generator<sup>[5]</sup>

P. Mathur, A. Gill, A. Yadav, A. Mishra, N.K. Bansode

IEEE International Conference on Computational Intelligence in Data Science (ICCIDS 2017)

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## Software Highlights

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### Pymobots: Stochastic Algorithms simulator for the Amoebot Model<sup>[6]</sup>

PYTHON, DJANGO, JAVASCRIPT

### FitFast: Quickly fine-tune language models for your downstream NLP tasks<sup>[7]</sup>

PYTHON, PYTORCH

### Retrogram: Retrofitted (domain-adapted) word vectors with Word2Vec skip-gram model<sup>[8]</sup>

PYTHON, TENSORFLOW

### Camera2Caption: A Real-time Image Caption Generator<sup>[9]</sup>

PYTHON, TENSORFLOW

[\[more on github\]](#)

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## Outreach & Miscellanea

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### The Carpentries • Instructor

APR 2020 - PRESENT

### Teach for India • Education Volunteer

JUL 2017 - SEP 2017