# Rahul **Yedida**

Ph.D. Student

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## Education

### North Carolina State University — *Raleigh, USA*

Ph.D. in Computer Science — *Aug 2019 - Present*

- GPA: 4.0
- TA for C and Software Tools. Developed Python scripts to check correctness and style of submissions, and held weekly office hours for 56 students.

### PES University, Electronic City Campus — *Bangalore, India*

B.E. in Computer Science and Engineering — *Aug 2015 - Jul 2019*

- GPA: 7.87/10. Graduated First Class with Distinction.
- Independently conducted C++ classes after-hours
- Talks presented: "How to design a Flappy Bird game", "An Introduction to Data Analysis", and "Complexity Classes and NP-Completeness"
- Developed a machine learning blog detailing the math and implementation for all algorithms, with 9.2k views (5.9k in 2020).

## Employment

### Indian Institute of Astrophysics — *Bangalore, India*

Research Intern — *Jul 2018 - Mar 2019*

- Worked on image restoration of globular clusters using convolutional neural networks.
- Worked on novel adaptive learning rate schedulers for SGD.

## Research

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| 2020 | **Improving Deep Learning for Defect Prediction (using the GHOST Hyperparameter Optimizer),** Rahul Yedida and Tim Menzies | *Under Review* |
| 2020 | **How to Recognize Actionable Static Code Warnings (Using Linear SVMs),** Xueqi Yang, Jianfeng Chen; Rahul Yedida; Zhe Yu; Tim Menzies | *Under Review* |
| 2020 | **Parsimonious Computing: A Minority Training Regime for Effective Prediction in Large Microarray Expression Data Sets.,** Shailesh Sridhar, Snehanshu Saha, Azhar Shaikh, Rahul Yedida and Sriparna Saha. *In International Joint Conference on Neural Networks (IJCNN) 2020.* | *Published* |
| 2020 | **Evolution of Novel Activation Functions in Neural Network Training and implications in Habitability Classification.,** Snehanshu Saha, Nithin Nagaraj, Archana Mathur, Rahul Yedida. *In SIAM Conference on Mathematics of Data Science (MDS) 2020* | *Published* |
| 2019 | **LipschitzLR: Using theoretically computed adaptive learning rates for fast convergence,** Rahul Yedida, Snehanshu Saha, and Tejas Prashanth | *Under Revision* |
| 2019 | **Optimizing Inter-nationality of Journals: A classical gradient approach revisited via Swarm Intelligence,** Luckyson Khaidem, Rahul Yedida, Abhijit J. Theophilus. *In Springer Communications in Computer and Information Science (CCIS)* | *Published* |

## Relevant Projects

### SymNet

Python 3, Keras — *Jun 2019 - Present*

Created a high-level deep learning framework with a custom adaptive learning rate scheduler, novel activation functions, and built-in data pre-processing. The framework also picks reasonable default network architectures.

### Personalized Chatbot

Python 3 — *May 2019*

Fine-tuned GPT-2 345M model on message data (730k messages) from Telegram to create a personalized chatbot.

### Intelligent Tutoring System

Python 3 — *Sep 2018 - May 2019*

Implemented the back end of an Intelligent Tutoring System (ITS), using a Hidden Markov Model and a custom question selection algorithm.

### Activity Data Project

Python 3, Keras *Oct 2018 - Nov 2018*

Collected personal data on activities performed throughout the day for 9 months along with start/end times, and grouped tasks into 30 categories. Analyzed most productive hours of the day and built 2-layer LSTM predictive model.

## Honors & Awards

2017 **All India Rank 27,** National Creativity Aptitude Test (Category 2) *Bangalore, India*

2015 **Winner,** Microsoft Code Hunt, BMS College of Engineering *Bangalore, India*