

# Rahul Yedida

PH.D. STUDENT

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## Education

### North Carolina State University

PH.D. IN COMPUTER SCIENCE

Raleigh, USA

Aug 2019 - Exp. Jun 2024

### PES University, Electronic City Campus

B.E. IN COMPUTER SCIENCE AND ENGINEERING

Bangalore, India

Aug 2015 - Jul 2019

- GPA: 7.82/10
- Relevant coursework: Data Analytics; Data Mining; Machine Learning; Soft & Evolutionary Computing
- Independently conducted C++ classes after-hours in freshman year
- Presented several talks, including, "How to design a Flappy Bird game", "An Introduction to Data Analysis", and "Complexity Classes and NP-Completeness"

## Employment

### Indian Institute of Astrophysics

RESEARCH INTERN

Bangalore, India

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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|------|--|------------------|
| 2019 | <b>Evolution of Novel Activation Functions in Neural Network Training and implications in Habitability Classification</b> , Snehanthu Saha, Nithin Nagaraj, Archana Mathur, Rahul Yedida | Under Review     |
| 2019 | <b>LipschitzLR: Using theoretically computed adaptive learning rates for fast convergence</b> , Rahul Yedida, Snehanthu Saha   | Under Review     |
| 2019 | <b>Optimizing Inter-nationality of Journals: A classical gradient approach revisited via Swarm Intelligence</b> , Luckyson Khaidem, Rahul Yedida, Abhijit J. Theophilus                  | Under Review     |
| 2018 | <b>A suggested approach for identifying prolific authors</b> , Adel M. Aladwani, Snehanthu Saha, Rahul Yedida  | Under Review     |
| 2018 | <b>Employee Attrition Prediction</b> , Rahul Yedida et al. Presented at the RISE 2017 conference.  | Conference Paper |

## Teaching Experience

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| 2019 | <b>Teaching Assistant</b> , C and Software Tools | Fall |
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## Service to Profession

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| 2019 | <b>Technical Program Committee Member</b> , International Conference on Modeling, Machine Learning, and Astronomy |
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## 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.

### Machine Learning Blog

PYTHON 3

Jun 2018 - Present

Made a WordPress blog to teach machine learning, demonstrating all mathematical details with intuition and working code.

### 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.

## JournalBear

HTML, CSS, JAVASCRIPT, ELECTRON

Jun. 2017 - Feb 2019

Cross-platform journal application with AES-256 encryption. Rated 4/5 by Softpedia.

## 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.

## Issue Reporting System

PYTHON 3, FLASK, REACT

Sep 2018 - Nov 2018

Web application that allows users to submit issues, and filters duplicates when viewed by organizations using Latent Semantic Analysis.

## Result Scraper

MONGODB, NODE.JS, EXPRESS, REACT

Mar 2018

Website for scraping university examination results and displaying charts and printable reports, with caching using a database.

## Video Sharing Website

HTML/CSS, SASS, FLEXBOX, REACT.JS, REACT-ROUTER V4, MYSQL, EXPRESS.JS, NODE.JS, ELASTICSEARCH

Sep 2017 - Nov 2017

Simplified implementation of a video-sharing website with subscriptions and custom searching.

## Xtreme Calculations

VB.NET, PYTHON 3

Apr 2013 - Oct 2017

Windows math software to solve scientific and mathematical problems.

## Video Indexer

C++, QT, CMUSPHINX

Sep 2017

Cross-platform desktop application to detect the time(s) a given keyword was spoken in a given video.

## Web Development Projects

JAVASCRIPT, REACT.JS, D3.JS, SASS, NODE.JS, EXPRESS.JS, MONGODB

2017

Projects include URL shortener, rogue-like dungeon crawler game, voting application, Simon game, land surface temperature heatmap, and mapping meteorite impacts across the globe.

## Skills

<b>Languages</b>	C++, Python 3, HTML (Razor), CSS (Sass), JavaScript, Node.js, LaTeX, R
<b>Libraries</b>	jQuery, React.js, D3.js, PyTorch, Keras, RJAGS, JavaFX
<b>Frameworks</b>	Express.js, ASP.NET Core 2, Entity Framework Core, Flask
<b>Databases</b>	MySQL, MongoDB
<b>Tools</b>	Visual Studio, Jupyter, Google Compute Engine

## Honors & Awards

2017	<b>All India Rank 27</b> , National Creativity Aptitude Test (Category 2)	Bangalore, India
2015	<b>Winner</b> , Microsoft Code Hunt, BMS College of Engineering	Bangalore, India

## Independent Coursework

SEP 2016	<b>Machine Learning (CS229)</b> , Andrew Ng, Stanford Engineering Everywhere	Stanford University
JUL 2017	<b>Building a JavaScript Development Environment</b> , Cory House	Pluralsight
JAN 2018	<b>Doing Data Science with Python</b> , Abhishek Kumar	Pluralsight
MAR 2018	<b>Building a Web App with ASP.NET Core, MVC, Entity Framework Core, Bootstrap and Angular</b> , Shawn Wildermuth	Pluralsight
AUG 2018	<b>Deep Learning Specialization</b> , deeplearning.ai	Coursera
OCT 2018	<b>Computational Neuroscience</b> , University of Washington	Coursera
MAR 2019	<b>Practical Deep Learning for Coders v3</b> , fast.ai	fast.ai
JUN 2019	<b>Docker Deep Dive</b> , Nigel Poulton	Pluralsight
JUL 2019	<b>Advanced Java Concurrency Patterns</b> , Jose Paumard	Pluralsight
JUL 2019	<b>Bayesian Statistics: Techniques and Models</b> , University of California, Santa Cruz	Coursera