# Rahul **Yedida**

PH.D. STUDENT

*Department of Computer Science, NC State University*

+1 (919) 636-8327  |  ✉ ryedida@ncsu.edu  |  ⌂ yrahul3910.github.io/whyrahul  |  ⌂ yrahul3910  |  in rahul-yedida

## Education

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

PH.D. IN COMPUTER SCIENCE                                                    *Aug 2019 - Exp. Jun 2024*

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

B.E. IN COMPUTER SCIENCE AND ENGINEERING                                   *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**                                          *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

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

## Teaching Experience

| | | |
|---|---|---|
| 2019 | **Teaching Assistant**, C and Software Tools | *Fall* |

## Service to Profession

| | |
|---|---|
| 2019 | **Technical Program Committee Member**, International Conference on Modeling, Machine Learning, and Astronomy |

## 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 ────────────────────────────────────────────────

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

## 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* |

## Independent Coursework ─────────────────────────────────

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