

EDUCATION

North Carolina State University

Ph.D. Computer Science - GPA: 3.9/4.0

Raleigh, NC

Aug. 2019 – Present

PES University

B.E. Computer Science - GPA: 3.2/4.0

Bangalore, India

Aug. 2015 – May 2019

EMPLOYMENT

North Carolina State University

Graduate Research Assistant

Raleigh, NC

Jan. 2020 – Present

- **Research:** Co-authored 3 first-author papers and 2 other papers.

Graduate Teaching Assistant

Aug. 2019 – Jan. 2020

- **Office hours:** Held office hours for 54 undergraduate students.
- **Lecture:** Delivered lectures on object-oriented programming and RAII in C++.

Indian Institute of Astrophysics

Research Intern

Bangalore, India

Jul. 2018 - Mar. 2019

- **Image denoising:** Worked on image restoration of globular clusters using convolutional neural networks.
- **Research:** Proposed novel adaptive learning rate scheme for deep neural networks.

PUBLICATIONS

Yedida, R., & Menzies, T. (2021). A Replication of ‘A Systematic Study of the Class Imbalance Problem in Convolutional Neural Networks’. In *Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE '21)*, August 23–28, 2021, Athens, Greece.

Yedida, R., & Menzies, T. (2021). A Replication of ‘On the Number of Linear Regions of Deep Neural Networks’. In *Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE '21)*, August 23–28, 2021, Athens, Greece.

Yedida, R., & Saha, S. (2021). Beginning with Machine Learning: A Comprehensive Primer. *The European Physical Journal Special Topics*: 1-82.

Agrawal, A., Yang, X., Agrawal, R., **Yedida, R.**, Shen, X., & Menzies, T. (2021). Simpler Hyperparameter Optimization for Software Analytics: Why, How, When?. *IEEE Transactions on Software Engineering*, doi: 10.1109/TSE.2021.3073242

Yang, X., Chen, J., **Yedida, R.**, Yu, Z., & Menzies, T. (2021). Learning to recognize actionable static code warnings (is intrinsically easy). *Empirical Software Engineering*, 26(3), 1-24.

Yedida, R., & Menzies, T. (2021). On the Value of Oversampling for Deep Learning in Software Defect Prediction. *IEEE Transactions on Software Engineering*, doi: 10.1109/TSE.2021.3079841

Yedida, R., Krishna, R., Kalia, A., Menzies, T., Xiao, J., & Vukovic, M. (2021). Lessons learned from hyper-parameter tuning for microservice candidate identification. *arXiv preprint arXiv:2106.06652*.

Yedida, R., Yang, X., & Menzies, T. (2021). When SIMPLE is better than complex: A case study on deep learning for predicting Bugzilla issue close time. *arXiv preprint arXiv:2101.06319*.

Saha, S., Nagaraj, N., Mathur, A., **Yedida, R.**, & Sneha, H. R. (2020). Evolution of novel activation functions in neural network training for astronomy data: habitability classification of exoplanets. *The European Physical Journal Special Topics*, 229(16), 2629-2738.

Yedida, R., Abrar, S. M., Melo-Filho, C., Muratov, E., Chirkova, R., & Tropsha, A. (2020). Text Mining to Identify and Extract Novel Disease Treatments From Unstructured Datasets. *arXiv preprint arXiv:2011.07959*.

Yedida, R., Saha, S., & Prashanth, T. (2020). LipschitzLR: Using theoretically computed adaptive learning rates for fast convergence. *Applied Intelligence*, 1-19.

Sridhar, S., Saha, S., Shaikh, A., **Yedida, R.**, & Saha, S. (2020, July). Parsimonious Computing: A Minority Training Regime for Effective Prediction in Large Microarray Expression Data Sets. In *2020 International Joint Conference on Neural Networks (IJCNN)* (pp. 1-8). *IEEE*.

Khaidem, L., **Yedida, R.**, & Theophilus, A. J. (2019, November). Optimizing Inter-nationality of Journals: A Classical Gradient Approach Revisited via Swarm Intelligence. In *International Conference on Modeling, Machine Learning and Astronomy* (pp. 3-14). *Springer, Singapore*.

PROJECTS

Google Takeout Data Mining Feb. 2021 – May 2021
Python, Keras [GitHub](#)
 Data science project to use Google Takeout data to suggest products to advertise to a user from Amazon best sellers using BERT and achieved 0.4 F-1 score.

RAISE Aug. 2020 – Present
Python, Keras [GitHub](#) :: [PyPI](#)
 Sole developer for a PEP8/PEP257-compliant, ML Python package used by our research lab. Downloaded 4,000 times.

Personalized Chatbot May 2019
Python, Keras [GitHub](#)
 Fine-tuned a GPT-2 345M model on 730k messages from Telegram logs to create a personalized chatbot.

Intelligent Tutoring System Sep. 2018 – May 2019
Python [GitHub](#)
 Implemented an Intelligent Tutoring System backend using Bayesian Knowledge Tracing and a novel question selection algorithm.

Human Activity Data Project Oct. 2018 – Nov. 2018
Python, Keras [GitHub](#)
 Collected personal activity data for 9 months, grouped tasks into 21 categories. Analyzed most productive hours of the day and built a 2-layer predictive LSTM model, achieving 42% top-5 accuracy.

SKILLS

Languages: Python, JavaScript, C++, Swift, VB.NET
Frameworks: Flask, Keras, PyTorch, Node.js, React
Databases: SQL, MongoDB

TALKS

Complexity Classes and NP-Completeness, presented at PES University, Bangalore, 2017.

How to design a Flappy Bird game, presented at PES University, Bangalore, 2018.

Machine Learning, presented at PES University, Bangalore, 2018.

An Introduction to Data Analysis, presented at PES University, Bangalore, 2018.

SERVICE TO PROFESSION

Reviewer, IEEE Symposium Series on Computational Intelligence (SSCI) 2020

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