

EDUCATION

North Carolina State University

Ph.D. Computer Science – Advisor: Dr. Tim Menzies

Raleigh, NC

Aug 2019 - May 2024

PES University

B.E. Computer Science

Bangalore, India

Aug 2015 - May 2019

RECENT EMPLOYMENT

Amazon

Software Dev Engineer Intern

New York, NY

May 2023 - Aug 2023

- Implemented profile locks for Prime Video on Echo Show devices.
- **Technology:** React Native, TypeScript

Software Dev Engineer Intern

May 2022 - Jul 2022

- Developed a full-stack system to publish announcements in scorecards used by delivery service partners (DSPs).
- **Technology:** React/Redux, TypeScript, Redux Saga, DynamoDB, Java Spring

North Carolina State University

Graduate Teaching Assistant

Raleigh, NC

Aug 2023 - May 2024

- TA (with 2 others) for 149 students for a graduate Automated Software Engineering course.
- TA (with 4 others) for 289 students for a graduate Software Engineering course.

Graduate Teaching Assistant

Aug 2022 - May 2023

- TA (with 3 others) for 97 students for a graduate Automated Software Engineering course.
- TA (with 4 others) for 233 students for a graduate Software Engineering course.

Graduate Research Assistant

Jan 2020 - May 2022

- **Better, faster deep learning for SE:** Improved defect prediction by up to 123% (F-1 score), code smell detection by up to 30% (AUC)
- **Semi-supervised learning:** Achieved state-of-the-art results on static code warnings analysis using 10% of the labels.

Graduate Teaching Assistant

Aug 2019 - Dec 2019

- TA (with 1 other) for 159 students for an undergraduate C and Software Tools course.

RECENT PUBLICATIONS

See full list on [Google Scholar](#).

1. Baldassarre, M. T., Ernst, N., Hermann, B., Menzies, T., & **Yedida, R.** (2023). (Re)use of Research Results (is Rampant). *Communications of the ACM*, 66(2), 75-81.
2. **Yedida, R.**, Kang, H. J., Tu, K., Lo, D., & Menzies, T. (2023). How to Find Actionable Static Analysis Warnings: A Case Study with FindBugs. *IEEE Transactions on Software Engineering*, (01), 1-17.
3. **Yedida, R.**, Krishna, R., Kalia, A., Menzies, T., Xiao, J., & Vukovic, M. (2023). An Expert System for Redesigning Software for Cloud Applications. *Expert Systems with Applications*.
4. **Yedida, R.**, Menzies, T. (2022). How to Improve Deep Learning for Software Analytics (a case study with code smell detection). In *2022 IEEE/ACM 19th International Conference on Mining Software Repositories (MSR)*. IEEE, 2022.
5. **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

6. 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
7. 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.
8. **Yedida, R.**, Krishna, R., Kalia, A., Menzies, T., Xiao, J., & Vukovic, M. (2021). Lessons learned from hyper-parameter tuning for microservice candidate identification. *Proceedings of the thirty-sixth IEEE/ACM International Conference on Automated Software Engineering (ASE)*
9. **Yedida, R.**, & Saha, S. (2021). Beginning with Machine Learning: A Comprehensive Primer. *The European Physical Journal Special Topics*: 1-82.
10. 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.
11. **Yedida, R.**, Saha, S., & Prashanth, T. (2020). LipschitzLR: Using theoretically computed adaptive learning rates for fast convergence. *Applied Intelligence*, 1-19.
12. 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*.
13. 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*.

FUNDING

\$5,000, Google Cloud Academic Research Grant, Feb 2022

SERVICE TO PROFESSION

Reviewer, ICML 2024; Neural Processing Letters 2023, 2024; Neural Computing & Applications (NCAA), 2023; Artificial Intelligence Review 2023; ICLR 2024; NeurIPS 2023; Journal of Big Data, 2023; Automated Software Engineering (ASE), 2023; Empirical Software Engineering (EMSE), 2021; IEEE Symposium Series on Computational Intelligence (SSCI) 2020

PC Member, International Conference on AI Foundation Models and Software Engineering (FORGE) 2024; Automated Software Engineering (ASE) Artifact Evaluation Track, 2022; International Conference on Software Maintenance and Evolution (ICSME) Artifact Evaluation Track, 2021, 2022, 2023; International Conference on Modeling, Machine Learning, and Astronomy (MMLA), 2019

Student Volunteer, Automated Software Engineering (ASE) '21

HONORS AND AWARDS

Google Cloud Research Innovator, Feb 2022

Google Cloud Champion Innovator, Oct 2022

Google Cloud Champion Innovator - Cloud AI/ML, Jul 2023

Google Cloud Research Innovators Mentor, Dec 2022

RELEVANT PROJECTS

Programmable Resumes

Aug 2023 - Present

Python

[GitHub](#)

Developed a specification and implementation for modular, customizable resumes with support for two popular LaTeX templates.

pysh

May 2021 - Present

C++, TMLanguage

[GitHub](#)

Developed a superset of Python that allows running Shell code natively, with a VS Code syntax highlighting extension.

RAISE

Aug 2020 - Present

Python, Keras

[GitHub](#) :: [PyPI](#)

Sole developer for a PEP8-compliant, ML Python package used by our research lab and others for replicable results.

Downloaded 23k times.

Threaded Discussions Website

Feb 2021 - Jun 2021

MongoDB, Node.js, React

[GitHub](#)

Companion website for video calls that allows for Reddit-style, threaded discussions.

Google/Meta Data Mining

Feb 2021 - May 2021

Python, Keras

[GitHub](#)

Data science project to use Google Takeout and Meta user data to suggest products to advertise to a user from Amazon best-sellers using DistilGPT-2, and achieved 0.6 F-1 score.

NearConnect

Nov 2020 - Mar 2021

iOS, SwiftUI

[GitHub](#) :: [App Store](#)

iOS app to connect with people nearby using multicast peer-to-peer connections.

Novel Drug Repurposing Hypotheses

Oct 2019 - Feb 2020

Python, PyTorch

[GitHub](#)

Identified novel drug repurposing hypotheses using text mining of radio transcripts, and verified results.

Personalized Chatbot

May 2019 - 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.

JournalBear

Jan 2017 - Feb 2019

JavaScript, Electron

[GitHub](#) :: [Softpedia](#)

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

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.

Results Scraper

Mar 2018 - Aug 2018

MongoDB, Express.js, React, Node.js

[GitHub](#)

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

Video Sharing Website

Oct 2017 - Dec 2017

MySQL, Express.js, React, Node.js, Sass, Elasticsearch

[GitHub](#)

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

Web development projects

Jan 2017 - Nov 2017

MongoDB, Express.js, React, Node.js, Sass, D3.js

[CodePen](#)

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

Xtreme Calculations

Apr 2013 - Oct 2017

VB.NET, Python

[Softpedia](#)

Windows math software to solve scientific and mathematical problems, with over 30k downloads across multiple sites.

SKILLS

Languages: Python, TypeScript, Java, C++

Frameworks: Flask, Keras, PyTorch, Node.js, React

Databases: MySQL, MongoDB, DynamoDB