Rahul Yedida

Website :: GitHub :: LinkedIn :: Google Scholar

hello@ryedida.me
+1 (206) 660-7542

Education

North Carolina State University — Raleigh, NC
Ph.D. Computer Science — *Aug 2019 - Jul 2024*

- Advisor: *Dr. Tim Menzies*
- Dissertation: *Guidelines for the Application of Neural Technologies in Software Analytics (or: How to Do More with Less in SE)*

PES University — Bangalore, India
B.E. Computer Science – Advisor: Dr. Snehanshu Saha — *Aug 2015 - May 2019*

Employment

LexisNexis Legal & Professional — Raleigh, NC
Senior Data Scientist I — *May 2024 - Present*

- **Performance improvements:** Improved customer-facing product runtime by 24.8% and reduced peak memory usage duration by 21.3%.
- **Drafting improvements:** Helped improve complaint drafting results by 115% and motion drafting by 28.4% of usefulness.
- **Workflow improvement:** Led initiative to use Bayesian optimization for prompt tuning.
- **Technology:** Python, Litestar, React, TypeScript, Tailwind

Amazon — New York, NY / Bellevue, WA
Software Dev Engineer Intern — *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 — Raleigh, NC
PhD Student — *Aug 2019 - Jul 2024*

- **State-of-the-art hyper-parameter optimization:** Proposed a novel hyper-parameter optimization method that outperforms prior work and is 200-700% faster.
- **Better, faster deep learning for SE:** Improved defect prediction by up to 123% (F-1 score), code smell detection by up to 30% (AUC), issue lifetime prediction by up to 76% (accuracy), automated microservice partitioning by up to 285% (modularity)
- **Semi-supervised learning:** Achieved state-of-the-art results (up to 100% improvement in AUC) on static code warnings analysis using 10% of the labels.
- **Teaching:** Teaching assistant for 830 students in total, over 5 semesters, for CSC 230 (C and Software Tools), CSC 510 (Software Engineering), and CSC 591/791 (Automated Software Engineering)

Recent Publications

See full list on Google Scholar.

1. **Yedida, R.**, & Menzies, T. (2025). Is Hyper-Parameter Optimization Different for Software Analytics? *Accepted to IEEE Transactions on Software Engineering.*

2. 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.*

3. **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.*

4. **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.*

5. **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.*

Funding

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

Service to Profession

Guest Editor, IEEE Software Special Issue on The Impact of AI on Productivity and Code 2025; Automated Software Engineering (Journal) 2025; EMSE Special Issue on Replications and Negative Results (RENE) 2025

Co-Chair, Workshop on Replications and Negative Results (RENE) at ASE 2024

Reviewer, ICML 2024-2025; TMLR 2024; Neural Processing Letters 2023-2024; Neural Computing & Applications (NCAA), 2023-2025; Artificial Intelligence Review 2023; ICLR 2024-2025; 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, ICSE 2026; AAAI 2025; AI Foundation Models and Software Engineering (FORGE) at ICSE 2024; Automated Software Engineering (ASE) Artifact Evaluation Track, 2022; International Conference on Software Maintenance and Evolution (ICSME) Artifact Evaluation Track, 2021-2023; International Conference on Modeling, Machine Learning, and Astronomy (MMLA), 2019

Honors and Awards

Oct 2022 - Present - Google Cloud Champion Innovator - Cloud AI/ML

Dec 2022 - Google Cloud Research Innovators Mentor

Feb 2022 - Google Cloud Research Innovator

Relevant Projects

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 43k times.

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.

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 using a knowledge graph.

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.

Skills

Languages: Python, TypeScript, Java, C++, Gleam

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

Databases: MySQL, MongoDB, DynamoDB

Cloud: Google Compute Engine, S3, Google Cloud Storage, EC2