Rahul Yedida

Website :: GitHub :: LinkedIn :: Google Scholar :: Google Developers

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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*

- Improved customer-facing product runtime by 24.8% and reduced peak memory usage duration by 21.3%. Helped improve complaint drafting results by 115% and motion drafting by 28.4% of usefulness.
- Led initiatives to use Bayesian optimization for prompt tuning and migration effort from RAG to agentic drafting system.
- Developed fast passage filtering approach based on contrastive loss.
- **Technology:** Python, Litestar, React, TypeScript, Tailwind

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 SOTA and is 36.4% 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) compared to prior SOTA.
- **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)

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

RECENT PUBLICATIONS

See full list on Google Scholar.

1. **Yedida, R.**, & Menzies, T. (2025). Is Hyper-Parameter Optimization Different for Software Analytics? *IEEE Transactions on Software Engineering, 51(6).*

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, 49(4), 2856-2872.*

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, 219, 119673.*

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).*

6. **Yedida, R.**, & Menzies, T. (2021). On the Value of Oversampling for Deep Learning in Software Defect Prediction. *IEEE Transactions on Software Engineering, 48(8), 3103-3116.*

7. 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, 48(8), 2939-2954.*

8. 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.*

9. **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).*

10. **Yedida, R.**, & Saha, S. (2021). Beginning with Machine Learning: A Comprehensive Primer. *The European Physical Journal Special Topics*, 230(10), 2363-2444.

11. 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.*

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

13. 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).*

14. 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

Service to Profession

Contributing Member, Python Software Foundation (Mar 2021 - Present)

Guest Editor, IEEE Software SI: The Impact of AI on Productivity and Code 2025; ASEj SI: Replications and Negative Results (RENE) 2025; EMSE SI: Replications and Negative Results (RENE) 2025

Co-Chair, ASE 2025 Workshop on Intelligent Software Engineering; ASE 2024 Workshop on Replications and Negative Results (RENE)

PC Member, AAAI 2025-2026; ASE Industry Track 2026; FSE 2026; ICSE 2026; AI Foundation Models and Software Engineering (FORGE) 2024; ICSME Artifact Evaluation Track, 2021-2023; ASE Artifact Evaluation Track, 2022; International Conference on Modeling, Machine Learning, and Astronomy (MMLA), 2019

Reviewer, TSE 2025; NeurIPS 2023, 2025; EMSE 2021, 2025; ASEj 2025; ICML 2024-2025; ICLR 2024-2025; NCAA 2023-2025; TMLR 2024; Neural Processing Letters 2023-2024; Artificial Intelligence Review 2023; Journal of Big Data, 2023; ASE 2023; IEEE SSCI 2020

Honors

Google Developer Expert - ML and GCP   Mar 2025 - Present

The Google Developer Experts program is a global network of highly experienced technology experts, influencers, and thought leaders who have expertise in Google technologies, are active leaders in the space, natural mentors, and contribute to the wider developer and startup ecosystem.

Google Cloud Champion Innovator - Cloud AI/ML   Oct 2022 - Mar 2025

Champion Innovators are a global network of more than 500 professionals, nominated by Googlers, who are technical experts in Google Cloud products and services. Each Champion specializes in one of nine different technical categories. In 2025, the Champion Innovators program was merged into the Google Developer Experts program.

Invited Talks

Feb 2024, "*Improving deep learning performance using theoretical ML*" at BITS Pilani, KK Birla Goa Campus, India

Skills

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

Frameworks: Flask, Node.js, React

ML/AI: Keras, PyTorch, Hyper-parameter Optimization, Bayesian Optimization

Databases: MySQL, MongoDB, DynamoDB

Cloud: Google Cloud (Compute Engine, Cloud Storage, Vertex AI), AWS (EC2, S3, DynamoDB)