

# Lucas Rosenblatt

## Curriculum Vitae

December 2023

PhD Candidate (3rd Year)

New York University

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### Education

**New York University (ongoing)**

*PhD Candidate | GPA: 3.9*

New York City, NY

*Sept. 2021 – Present*

**Brown University, Honors**

*B.Sc. in Computer Science, B.A. English, Non-Fiction Writing | GPA: 3.8*

Providence, RI

*Sept. 2015 – May 2019*

**Awarded Senior Prize in CS**

*Senior Prize awarded for outstanding record in teaching, research and service*

### Funding

**2023 NSF Graduate Research Fellowship**

*March 2023 - Present*

**Center for Responsible AI PhD Fellowship**

*Sept. 2022 - Present*

### Publications

1. Rosenblatt, L., J. Stoyanovich, and C. Musco (2024). A Simple and Practical Method for Reducing the Disparate Impact of Differential Privacy. *Proceedings of AAAI 2024*.
2. Witter, R. T. and L. Rosenblatt (2024). I Open at the Close: A Deep Reinforcement Learning Evaluation of Open Streets Initiatives. *Proceedings of AAAI 2024*.
3. Bell, A., L. Bynum, N. Drushchak, T. Herasymova, L. Rosenblatt, and J. Stoyanovich (2023). The Possibility of Fairness: Revisiting the Impossibility Theorem in Practice. *Proceedings of the Conference on Fairness, Accountability, and Transparency (ACM FAccT)*.
4. Rosenblatt, L., B. Han, E. Posthumus, T. Crimmins, and B. Howe (2023). Top-down Green-ups: Satellite Sensing and Deep Models to Predict Buffelgrass Phenology. *Tackling Climate Change with Machine Learning @ NeurIPS*.
5. Rosenblatt, L., B. Herman, A. Holovenko, W. Lee, J. Loftus, E. McKinnie, T. Rumezhak, A. Stadnik, B. Howe, and J. Stoyanovich (July 2023). Epistemic Parity: Reproducibility as an Evaluation Metric for Differential Privacy. *Proc. VLDB Endow.* **16**(11), 3178–3191.
6. Rosenblatt, L. and R. T. Witter (2023). Counterfactual Fairness Is Basically Demographic Parity. *Proceedings of AAAI 2024*.
7. Rosenblatt, L., J. Allen, and J. Stoyanovich (2022). Spending Privacy Budget Fairly and Wisely. *Theory and Practice of Differential Privacy 2022 (@ICML)*.
8. Rosenblatt, L., L. Piedras, and J. Wilkins (2022). Critical Perspectives: A Benchmark Revealing Pitfalls in PerspectiveAPI. In: *Proceedings of the Second Workshop on NLP for Positive Impact (NLP4PI)*, pp.15–24.
9. Ammerlaan, R., G. Antonius, M. Friedman, H. S. Hossain, A. Jindal, P. Orenberg, H. Patel, S. Qiao, V. Ramani, L. Rosenblatt, et al. (2021). PerfGuard: deploying ML-for-systems without performance regressions, almost! *Proceedings of the VLDB Endowment* **14**(13), 3362–3375.
10. Hossain, H. S., L. Rosenblatt, G. Antonius, I. Shaffer, R. Ammerlaan, A. Roy, M. Weimer, H. Patel, M. Friedman, S. Qiao, P. Orenberg, et al. (2020). PerfGuard: Deploying ML-for-Systems without Performance Regressions. *MLOps*.
11. Rosenblatt, L., X. Liu, S. Pouyanfar, E. de Leon, A. Desai, and J. Allen (2020). Differentially private synthetic data: Applied evaluations and enhancements. *arXiv preprint arXiv:2011.05537*.
12. Rosenblatt, L., P. Carrington, K. Hara, and J. P. Bigham (2018). Vocal programming for people with upper-body motor impairments. In: *Proceedings of the 15th International Web for All Conference*, pp.1–10.
13. Rosenblatt, L. (2017). Vocalide: An ide for programming via speech recognition. In: *Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility*, pp.417–418.

## Graduate teaching

Regular office hours and grading for advanced theory course exploring contemporary computational methods that enable machine learning and data science at scale

### Section Leader - CSGA-1017

January 2023 - May 2023

*Responsible Data Science*

*New York City, NY*

### Teaching Assistant - CSGY-6763

September 2022 - December 2022

*Algorithmic Machine Learning and Data Science*

*New York City, NY*

## Patents

**System and Method for Machine Learning for System Deployments Without Performance Regressions** *HM Sajjad Hossain, Lucas Rosenblatt, Gilbert Antonius, Irene Shaffer, Remmelt Ammerlaan, Abhishek Roy, Markus Weimer, Hiren Patel, Marc Friedman, Shi Qiao, Peter Orenberg, Soundarajan Srinivasan, Vijay Ramani, Alekh Jindal, (MS# 408144-US-NP)*

## Work Experience

### ML Engineer/Researcher

June 2019 – 2021

*Microsoft AI Development Acceleration Program*

*Cambridge, MA*

- AI rotational program serving Microsoft organizations with applied research in machine learning and data science
- Rotations: Grey System's Lab, Microsoft+Harvard OpenDP (Smartnoise), Microsoft News, Fairlearn (spring 2021)

### Software Engineering Intern

Jun 2018 – Aug 2018

*Microsoft Garage*

*Cambridge MA*

- Developed machine learning approaches to object/shape detection for the Ink to Code platform

### Human-Computer Interaction Researcher

Jun 2017 – Jun 2018

*Carnegie Mellon University*

*Pittsburgh, PA*

- Advised by Dr. Jeff Bigham and Dr. Kotaro Hara, researched accessible programming interfaces
- Focused on assistive technology individuals with motor impairments and/or cerebral palsy
- Published two papers detailing VocalIDE, a vocal programming interfaces

## Projects

### Primary maintainer for SynRD: Open Source DP Benchmark tool | *DP, Repro* June 2022 – Present

- Collaborate with researchers at the University of Washington and with students from UCU in Lviv.

### Maintainer for Smartnoise: Open Source DP Toolkit | *Differential Privacy, Pytorch* December 2019 – Present

- Provide regular code updates, documentation, and pursue new offerings.
- MWEM implementation, QUAIL ensemble model, DP GANs, metrics etc.

### AI for my Life | *Undergraduate Thesis*

September 2019 – Present

- Catalogued attempt to use that data and uncover “non-intuitive insights” into my life.
- Nominated for “Theories in Action,” a Brown University forum for sharing undergraduate theses

### VocalIDE | *Experimental Tool, Javascript*

June 2017 – May 2018

- Developed accessible programming interface for vocal programming
- Wrote system to tokenize and interpret vocal commands into Java code
- Conducted two studies to iterate on system

### Empor.co | *Start-up, Full-stack iOS*

June 2016 – July 2018

- Co-founded a start-up with Zachary Horvitz
- Mobile marketplace for college students to buy and exchange goods and services
- Full stack/entrepreneurial experience, ultimately disbanded the company.

## Skills

**Programming languages:** Python, C#/C, Java, SQL, JavaScript, HTML/CSS, etc.

**Tools & Libraries:** numpy, pandas, pytorch, aws, react, git, azure

**Spoken languages:** Dutch (heritage speaker, proficient) and French (A2 Level)

**Software Suites:** Adobe (Premier, Photoshop, Illustrator), Logic, Maya