**Lisa Dunlap**

Curriculum Vitae

[lisabdunlap@gmail.com](mailto:lisabdunlap@gmail.com) | [github.com/lisadunlap](http://github.com/lisadunlap) | [linkedin.com/in/lisabdunlap](http://linkedin.com/in/lisabdunlap) | [lisabdunlap.com](http://lisabdunlap.com/)

**Areas of Interest: Data-centric AI, Explainable AI , Vision+Language, ML Systems**

EDUCATION

Aug 2021 - present **University of California, Berkeley**

PhD EECS

**Lab Affiliations:** RISELab, BAIR

**Advisors:** Joseph Gonzalez, Trevor Darrell

Jun 2017 – Dec 2020 **University of California, Berkeley**

B.A. Computer science and Mathematics

**Lab Affiliations:** RISELab

**Advisors:** Joseph Gonzalez, Ion Stoica, Sarah Bargal (Boston University)

PAPERS

2023 **[Neurips]** L. Dunlap, A. Umino, P. Zhang, J. Yang, J. E. Gonzalez, T. Darrell “Diversify Your Vision Datasets with Automatic Diffusion-based Augmentation” [Link](https://arxiv.org/abs/2305.16289).

2023 **[NeurIPS]** G. Luo, L. Dunlap, D. Huk Park, A. Holynski, T. Darrell “Diffusion Hyperfeatures: Searching Through Time and Space for Semantic Corresponence” [Link](https://arxiv.org/abs/2305.14334).

2023 **[ICLR (Spotlight)]** L. Dunlap, C. Mohri, D.Guillory, H. Zhang, T. Darrell, J. E. Gonzalez, A. Raghunanthan, A. Rohrbach “Using Language to Extend to Unseen Domains” [Link](https://arxiv.org/abs/2210.09520).

2022 **[CVPR 2022]** S. Petryk\*, **L. Dunlap\***, K. Nasseri, J. Gonzalez, T. Darrell, A. Rohrbach. “On Guiding Visual Attention with Language Specification”. [Link](https://arxiv.org/pdf/2202.08926.pdf)

2021 **L. Dunlap**, A. Starosta, K. Curtis, Z. Wang, C. Sarkar, R. Sriharsha. “Machine Log Parsing with Named Entity Recognition”. [Blog](https://www.splunk.com/en_us/blog/it/how-splunk-is-parsing-machine-logs-with-machine-learning-on-nvidia-s-triton-and-morpheus.html).

2021 **[SOCC]** **L. Dunlap**, K. Kandasamy, U. Mishra, R. Liaw, J. Gonzalez, I. Stoica, M. Jordan. “Hyperparameter Tuning with Elastic Resources”. [Link](https://dl.acm.org/doi/abs/10.1145/3472883.3486989). [Talk](https://www.youtube.com/watch?v=nN-ddXnW-_k).

2020 **[EuroSys]** R. Liaw\*, U. Mishra\*, **L. Dunlap**, R. Bhardwaj, A. Tumanov, J. Gonzalez, I. Stoica. “RubberBand: Cloud Based Hyperparameter Tuning”. [Link](https://dl.acm.org/doi/10.1145/3447786.3456245). [Talk](https://www.youtube.com/watch?v=w_04ks34jwk).

2020 **[ICLR]** A. Wan, **L. Dunlap\*,** D. Ho\*, J. Yin, S. Lee, H. Jin, S. Petryk, S. A. Bargal, and J. E. Gonzalez. “NBDT: Neural-Backed Decision Trees”. arXiv preprint arXiv:2004.00221, 2020. [Link](https://arxiv.org/abs/2004.00221). [Blog Post](https://bair.berkeley.edu/blog/2020/04/23/decisions/)

2019 **[SOCC]** R. Liaw, R. Bhardwaj, **L. Dunlap**, A. Tumanov, J. E. Gonzalez, I. Stoica “Hypersched: Dynamic resource allocation for model development on a deadline”. AMC Symposium on Cloud Computing 2019. [Link](https://arxiv.org/abs/2001.02338)

2019 **[UAI]** X. Wang, F. Yu, **L. Dunlap**, R. Wang, Y. A. Ma, A. Mirhoseini, T. Darrell, and J. E. Gonzalez. “Deep Mixture of Experts Via Shallow Embedding”. Conference on the Uncertainty of Artificial Intelligence 2019. [Link](http://proceedings.mlr.press/v115/wang20d/wang20d.pdf)

2019 **[Western North America Naturalist]** X. Wang K. Utsumi, C. Kusaks, R. Pedersen, C. Staley, **L. Dunlap**, S. G. Smith, M. A. Eifler, D. A. Eifler. “Habitat-dependent search behavior in the Colorado Checkered Whiptail (Aspidoscelis neotesselata). [Link](https://bioone.org/journals/Western-North-American-Naturalist/volume-80/issue-1/064.080.0102/Habitat-Dependent-Search-Behavior-in-the-Colorado-Checkered-Whiptail-Aspidoscelis/10.3398/064.080.0102.short)

TALKS/POSTERS

2023 [Talk] From Explainable to Advisable Models– **Explainability in Machine Learning Workshop, Tubingen**

2022 [Talk] A Realistic Approach to Interpretability – **Soroco**

2022 [Talk] Hyperparameter Tuning on the Cloud – **AWS AutoML Reading Group**

2021 [Talk] Elastic Hyperparameter Tuning on the Cloud – **Symposium on Cloud Computing (SoCC)**

2021 [Talk] Rubberband: Cloud Based Hyperparameter Tuning -- **EuroSys**

2021 [Talk] Parsing Machine Logs with Machine Learning – **NVIDIA GTC Conference**

2021 [Talk/Poster] SEER: A Bandit-Based Algorithm for Hyperparameter Tuning on the Cloud – **RISELab Winter Retreat**

2020 [Poster] Rubberband: Hyperparameter Tuning Using ElasticResources – **RISELab Undergraduate Poster Session**

2020 [Talk] Making Decision Trees Accurate Again: Neural Backed Decision Trees – **RISELab Summer Retreat**

2020 [Talk] Evaluating Explainability and Explanations for Segmentation Models – **BAIR XAI Virtual Retreat**

2019 [Poster] Evaluating Explainability: A Quantitative Study on Current Explainability Techniques – **RISE Winter Retreat**

2019 [Poster] Asynchronous Bayesian Optimization for Hyperparameter Tuning – **RISE Summer Retreat**

WORK EXPERIENCE

May 2022 – Aug 2022 **Perception Intern, Nuro**

Manager: Lance Martin

Project: monitoring data quality for semantic segmentation

Feb 2021 - Sep 2021 **ML Engineer, Splunk Inc.**

Manager: Ram Sriharsha, Chandrima Sarkar

Project: Applied research in anomaly detection, NLP for log analysis, PII detection

Oct 2019 – Sep 2021 **Ray Tune Contributor, Anyscale**

Mentor: Richard Liaw

Project: HyperSched, BOHB

Sep 2018 – Dec 2020 **Undergraduate Researcher, UC Berkeley RISELab**

Advisors: Joesph Gonzalez, Sarah Bargal, Ion Stoica

Project: Research in explainable computer vision and hyperparameter tuning

May 2020 - Aug 2020 **ML Applied Research Intern, Splunk Inc.**

Manager: Ram Sriharsha

Project: Anomaly detection, log parsing with NLP

May 2019 - Aug 2019 **Data Science Intern, Flowcast**

Manager: Ken So

Project: Explainable credit assessment models

May 2018 – Aug 2018 **Undergraduate Researcher, Kansas University**

Mentors: Douglas Eifler, Maria Eifler

Project: Behavioral ecology research in herpetology