Andrey Risukhin

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EDUCATION

University of Washington, Seattle, WA

- M.S. Computer Science   2023 - 2025
- B.S. Computer Science with Data Science   2019 - 2023

RESEARCH EXPERIENCE

Detecting Inconsistency, Robustness and Sensitivity of Language Models is summer gap relevant? Jan 2024 – Present
PhD Student Mentor: Hila Gonen, Faculty Advisor: Noah Smith

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- Investigated llama3 robustness and sensitivity across 4 datasets and 3 sources of inconsistency
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Contextual AI   Jun 2024 – Sep 2024
Applied Research Intern

- DSPy, SAMMO; extending COPRO, MIPRO to multiple prompt edits
- Designed, tested automatic prompt optimization pipelines, saving CMLE time toward automatic hill climbing
- Designed user behavior analytics process, to proactively reveal failures and gather implicit user feedback annotations

ColorGrid project?   Mar 2024 – Jun 2024

Finegrained Eval   Jun 2023 – Dec 2023
PhD Student Mentor: Yushi Hu, Faculty Advisor: Noah Smith

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- TRL, datasets,

Noah's ARK Natural Language Processing Lab (UW)   Sep 2022 – Present
Undergraduate Research Assistant

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- Presented monthly at weekly lab meetings, leading discussion of contemporary methods relevant to NLP
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Efficient Attention   Sep 2022 – Jun 2023
PhD Student Mentor: Hao Peng, Faculty Advisor: Noah Smith

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- Implemented 3 efficient transformer attention methods (200M parameters) and trained on Wikitext-103 (100M token)
- Led comparison of RL, SFT methods for generating text across 5 datasets and 8 policy metrics (40 train runs)
- Implemented efficient transformer attention methods using einsum and PyTorch into Fairseq repository for evaluation

Yoodli (AI Speech Coaching Startup)   Feb 2023 – Mar 2023
Machine Learning Intern

- Used OpenAI APIs to run 3 speech context extraction experiments, further personalizing AI-generated coach feedback
- Presented analysis of 1000 most recent speeches, supporting deployment of context extraction to production service

Avanade   Jun 2022 – Aug 2022
Data Engineering and Solution Area Intern

- Collected, annotated images of roadside utility poles. Augmented (including cropping,)
- Trained 10x faster utility pole care models (Azure Cognitive Services). Classification task
- Raised 50% baseline accuracy to 70%, using clean data, balanced classes,

Computer Vision Physiological Signal Detection (UW)   Dec 2021 – Jun 2022
Xin Liu, Soumyadip ..

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Undergraduate Research Assistant
- Augmented subject videos (OpenCV), achieving 8.6x lower Mean Average Error on pulse and respiration MTTS-CAN
- Applied linear, nonlinear lighting augmentation to UBFC dataset, ran 50 experiments boosting cross-tone prediction
- Augmented subject videos to achieve lower Mean Average Error on pulse and respiration MTTS-CAN predictions
- Wrote Python code to apply linear and nonlinear lighting augmentation to UBFC dataset, ran ~50 experiments
- Achieved 8.6x lower MAE on subjects with skin tones underrepresented in the data using gamma correction

TEACHING EXPERIENCE

<how to organize when duplicate classes in different times>

Venture Scale Software Entrepreneurship winter25

Foundations of Computing autumn24, Robbie

Foundations of Computing spring24, Kevin + James

Venture Scale Software Entrepreneurship winter24

Venture Scale Software Entrepreneurship winter23

Foundations of Computing autumn21, Kevin

Paul G. Allen School of Computer Science spring21 Mar 2021 – Jun 2021
Machine Learning Teaching Assistant
- Created, presented weekly lessons for CSE 416 Introduction to Machine Learning, provided TAs with lessons
- Taught 20+ students machine learning with PyTorch, Pandas and Scikit-Learn for data and deep learning
- Introduced students to graphical inference, networks, and singular value decomposition applications
- Developed coding worksheets to teach neural networks, regularization, performance metrics, and model equity

PUBLICATIONS

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[ColorGrid, AAAI in review]

TALKS

Networks & Choice Ranking | Statistics & Probability Association Mar 2021 - Jun 2021
- Implemented graph ranking models: MultiLogit, PageRank, SpringRank to infer faculty hiring across institutions
- Studied, presented utility and choice-making models for networks through 1:1 PhD student-directed reading

LEADERSHIP

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WORK / VOLUNTEER EXPERIENCE

Stealth Startup Jun 2023 – Oct 2023
Machine Learning Lead
- Designed, implemented Python service sourcing 10M web data records, overcoming model training cold start problem
- Owned critical search and recommendation algorithm, from design, QA, training, and implementation into MVP
- Led data annotation from scoping (25M, 455k hr) to automation, reducing hours by 70% and creating launch dataset

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CDL volunteering virtual, virtual, in person

RigMonkey Data Scientist | Founded Startup   Feb 2021 – Dec 2021
- With 3 cofounders, analyzed market data and 40 user interviews to validate our business, fulfilling 200 tailored builds
- Owned automated PC build creation from data scraping and ingestion to generating best-on-market builds

HONORS AND AWARDS

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COURSEWORK

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Transcript? Or highlight relevant courses