Andrey Risukhin

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EDUCATION

University of Washington   Graduation Dec 2023

B.S. Computer Science with Data Science   **GPA: 3.64**

Skills: Deep Learning Research, User-Centered Design, Data Visualization, Testing

Python, R, SQL, Java, C++

WORK EXPERIENCE

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

Undergraduate Research Assistant

- Implemented, evaluated 3 efficient transformer attention methods (einsum, PyTorch) into Fairseq repository
- Prepared 10% of Wikitext-103 dataset (bash script) used to train and compare 3 models (~200M parameters each)
- Organized weekly lab meetings, coordinating guests and leading discussion of contemporary NLP methods, incentives

Yoodli (AI Speech Coaching Startup)   Feb 2023 – Mar 2023

Machine Learning Intern

- Ran 3 experiments, extracting context from speeches that informed AI generated coaching feedback (Python, OpenAI)
- Presented analysis of 1000 most recent speeches, results of experiments. Deployed context extraction to production

Avanade   Jun 2022 – Aug 2022

Data Engineering and Solution Area Intern

- Trained 10x faster utility pole care models (Azure Cognitive Services). Raised 50% baseline accuracy to 70%, clean data
- Wrote SQL for client-facing IaaS/PaaS price comparison webapp. Practiced Azure DevOps, agile methodology
- Created, pitched AI metaverse project for internal FUEL Hackathon. Earned top NA AI project (230 participants)

Computer Vision Physiological Signal Detection (UW)   Dec 2021 – Jun 2022

Undergraduate Research Assistant

- 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

Paul G. Allen School of Computer Science   Mar 2021 – Jun 2021

Machine Learning Teaching Assistant

- 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

TECHNICAL EXPERIENCE

RigMonkey Data Scientist | Founded Startup   Feb 2021 – Dec 2021

- With 3 cofounders, used Pitchbook market data and 40+ user research interviews to validate our business
- Implemented the algorithm pairing PC builds to 100 user requests, minimizing 7-dimensional weighted distance
- Created R webscraping scripts to fetch cheapest PC Parts within parameters, automating build creation process

Nontransitive Dice R Package | Personal Project   Aug 2021

- Created, published a statistical package for simulating nontransitive dice in R (called "ntdice"), with code coverage
- Practiced workflow of iteratively modifying code and testing the package until all tests are passed

Networks & Choice Ranking | Statistics & Probability Association   Mar 2021 - Jun 2021

- Implemented graph ranking models: MultiLogit, PageRank, SpringRank to infer faculty hiring across institutions
- Studied utility and choice-making models for networks through 1:1 PhD student-directed reading
- Presented report to peers, comparing the models' performance, using Python to compute and visualize models