## Mukund Srinath

State College, PA

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### Education

Pennsylvania State UniversityExpected: May, 2024PhD, InformaticsGPA: 3.85Co-supervised: C. Lee Giles and Shomir Wilson\*\*Pennsylvania State UniversityAugust, 2017 - May, 2019MS, Information Sciences and TechnologyGPA: 3.88R. V. College of Engineering, IndiaAugust, 2011 - May, 2015BE, Electrical and Electronics EngineeringGPA: 8.94

### Experience

Human Language Technologies Lab

Research Assistant

State College, PA
August, 2019 - Present

- · Pretrained BERT-based and GenAI large language models (LLM) for the privacy policy domain. HuggingFace
- · Designed and developed, the world's 1st privacy policy search engine incorporating retrieval augmented generation (RAG) pipeline.
- · Achieved SoTA results on semantic similarity, named entity recognition (NER), and question-answering tasks.
- · Developed a specialty crawler and collected the largest corpus of privacy policies containing ~4 million policies.

Intelligent Information Systems Lab

State College, PA
August, 2019 - Present

Machine Learning Researcher

- · Created prompt engineering techniques to identify biases by jail-breaking LLMs GPT-4, BARD, and Llama.
- · Designed ethics sheet to aid the development of trustworthy sentiment analysis models after surveying 189 papers.
- · Designed model agnostic bias detection technique to measure implicit and explicit biases in word vectors and large language models.

Trustpage
Machine Learning Intern

Detroit, MI

May, 2022 - August, 2022

- · Designed evaluation metrics to track the performance of a company-wide suite of machine learning models.
- · Implemented and deployed a question similarity model on GCP, improving performance by 12%.
- · Applied feature engineering and synthetic data generation techniques on low-resource tasks.

McFadyen Digital

Bangalore, India July, 2015 - July, 2017

# Software Engineer

- · Implemented a full-life-cycle webapp of a human resource information system supporting  $\sim 500$  users.
- · Developed backend and frontend online retail features for search, payment, and checkout functionality.

### Awards and Honors

- · Liberatory Tech Scholar, 2024
- · Outstanding Paper @EMNLP'23
- · Best Student Paper @DocEng'23
- · Best Short Paper @TrustNLP Workshop (ACL'23)
- · Best Student Paper @PETS'23
- · Semi-finalist @Nittany AI Challenge 2023, for ClassCollab: Peer-learning based adaptive learning system.
- · Semi-finalist @Nittany AI Challenge 2023, for ChronoNews.ai: AI generated timeline of news articles.
- · 2nd place @HackPSU 2019, for *Beyond Tweet*, an application that combines geospatial census data with tweet sentiment to help make market predictions.
- · 2nd place and \$20,000 in funding @Nittany AI Challenge 2018, for ProFound: A professor search engine.
- · **3rd place** @HackPSU 2018, for *WeatherOrNot*, a travel application to recommend vacation destinations based on travel prices, and weather preferences.

· 1st place and honorable mention by IBM @HackPSU 2017, for *FindViser* an application that suggests research advisers to graduate students.

### Additional Projects

News Timeline Summarization [Python, PyTorch, scikit-learn, Elasticsearch]

Objective: Given a news article, create an explainable timeline of news story unfolding over time. Techniques: Recommendation system, explainable AI, clustering, document similarity, vector search

Generative AI Language Understanding Benchmark [Python, TensorFlow]

Objective: To evaluate foundation generative models on privacy policy language understanding tasks.

Techniques: GenAI fine-tuning, zero-shot and few-shot prompt engineering

Explainable and Fair Model Distillation [Python, PyTorch]

Objective: Mitigate biases by creating fair distilled models through counterfactual generation.

Techniques: XAI, knowledge distillation, statistical analysis, visualization

Skills

Machine Learning Skills: sklearn, Tensorflow, PyTorch, R. Experience with multi-GPU processing.

**Development Skills:** Python, Java, C++, ElasticSearch, Django, SQL. Experience with Git and multiple OS.

### Selected Publications

Mukund Srinath, Pranav Venkit, Maria Badillo, Florian Schaub, C. Lee Giles, Shomir Wilson Semantic Similarity Matching for Data Practice Identification in Privacy Policies (Under Review) European Chapter of the Association for Computational Linguistics (ACL 2024)

Mukund Srinath\*, Pranav Venkit\*, Sanjana Gautam, Vipul Gupta, Rebecca Passonneau, Shomir Wilson The Sentiment Problem: A Critical Survey towards Deconstructing Sentiment Analysis

[Outstanding Paper] Empirical Methods in Natural Language Processing (EMNLP 2023)

Mukund Srinath, Lee Matheson, Pranav Venkit, Gabriela Fortuna, Florian Schaub, Lee Giles, Shomir Wilson Privacy Now or Never: Large-Scale Extraction and Analysis of Dates in Privacy Policy Text
[Best Paper] The 23rd ACM Symposium on Document Engineering (DocEng, 2023)

Mukund Srinath, Soundarya Sundareswara, C. Lee Giles, Shomir Wilosn Privacy Lost and Found: An Investigation at Scale of Web Privacy Policy Availability The 23rd ACM Symposium on Document Engineering (DocEng, 2023)

Pranav Venkit, Mukund Srinath, Shomir Wilson

Automated Ableism: An Exploration of Explicit Disability Biases in Sentiment and Toxicity Analysis Models [Best Paper] 3rd Workshop on Trustworthy Natural Language Processing (ACL, 2023)

Abraham Mhaidli, Selin Fidan, An Doan, **Mukund Srinath**, Lee Matheson, Shomir Wilson, Florian Schaub Researchers' Experiences in Analyzing Privacy Policies: Challenges and Opportunities

[Best Paper] Proceedings on Privacy Enhancing Technologies (PETS, 2023)

Pranav Venkit, Mukund Srinath, Shomir Wilson

A Study of Implicit Language Model Bias Against People With Disabilities 29th International Conference on Computational Linguistics (COLING, 2022)

Mukund Srinath, Shomir Wilson, C. Lee Giles.

Privacy at Scale: Introducing the PrivaSeer Corpus of Web Privacy Policies.

59th Annual Meeting of the Association for Computational Linguistics (ACL, 2021)

Mukund Srinath, Soundarya Sundareswara, Shomir Wilson, C. Lee Giles.

PrivaSeer: A Privacy Policy Search Engine.

International Conference on Web Engineering (ICWE, 2021)