

Mukund Srinath

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Education

Pennsylvania State University PhD, Informatics Co-supervised by C. Lee Giles and Shomir Wilson	<i>Expected: May, 2024</i> GPA: 3.85
Pennsylvania State University MS, Information Sciences and Technology	<i>August, 2017 - May, 2019</i> GPA: 3.88
R. V. College of Engineering, India BE, Electrical and Electronics Engineering	<i>August, 2011 - May, 2015</i> GPA: 8.94

Work Experience

Trustpage Machine Learning Intern	Detroit, MI <i>May, 2022 - August, 2022</i>
<ul style="list-style-type: none">Designed evaluation metrics to track performance of company-wide suite of machine learning models.Implemented and deployed a question similarity model on GCP, improving on existing implementation by 12%.Applied feature engineering and synthetic data generation techniques on a task with few training samples.Created result visualizations and communicated them to non-technical teams after aligning on business objectives.	
ClearAvenue Software Engineering Intern	Columbia, MD <i>May, 2018 - August, 2018</i>
<ul style="list-style-type: none">Designed a proof-of-concept to improve medical device security in software defined networks.Explored unsupervised anomaly detection methods to detect potential network security threats.	
McFadyen Digital Software Engineer	Bangalore, India <i>July, 2015 - July, 2017</i>
<ul style="list-style-type: none">Implemented a full-life-cycle webapp of a human resource information system supporting ~500 users.Developed backend and frontend online retail features for search, payment and checkout functionality.	

Research Experience

Human Language Technologies Lab Research Assistant	Pennsylvania State University <i>August, 2019 - Present</i>
<ul style="list-style-type: none">Applying natural language processing and information retrieval techniques to analyze privacy policies at scale.Created a novel crawling technique to collect the largest corpus of privacy policies containing over 2M policies.Designed, created and maintain, end-to-end, the world's first privacy policy search engine, including, creating custom ranking function, and statistical analysis of results and user engagement).Achieved state of the art results on classification, named entity recognition (NER) and question answering tasks on privacy policies by creating PrivBERT, a privacy language model.	
PIKE Group Researcher	Pennsylvania State University <i>August, 2017 - July, 2019</i>
<ul style="list-style-type: none">Designed a novel technique to select best answers from a list of non-fact-based questions by generating questions.Implemented a convolutional neural network (CNN) based algorithm using TensorFlow to rank answers achieving a precision@1 score of 0.452 and mean reciprocal rank of 0.59, thereby setting a baseline for a novel dataset.	

Awards

- Semi-finalist** in Nittany AI Challenge, 2023 for [ChronoNews.ai](#) an application that creates a timeline of news articles.
- 2nd place** in 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** in Nittany AI Challenge, 2018 for [ProFound: A professor search engine](#).

- **3rd place** in 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** at HackPSU, 2017 for *FindViser* an application that suggests research advisers to graduate students.

Additional Projects

News Timeline Summarization

- Designed a novel tool that captures news from curated sources and organizes it in the form of a timeline for improved sense-making as a means to combat fake news.
- Developed the document clustering, timeline creation, title text generation and subjectivity detection modules using PyTorch.

Personal Information Type Extraction

- Designed a novel scalable technique to extract the types of personal information collected from users from over 1.4 million privacy policies. Trained a BERT based model to identify valid personal information types given inputs of noun phrases and their POS tags.

ProFound: Professor Search Engine

- Designed an end-to-end system to track professors based on research topics and interests. Crawled, indexed and ranked ~500 academic websites.

Skills

Programming Languages	Python, Java, Javascript, C++
Frameworks and Packages	TensorFlow, PyTorch, scikit-learn, ElasticSearch, Scrapy, SQL

Publications

Pranav Venkit, **Mukund Srinath**, Shomir Wilson

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

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

Privacy Lost and Found: An Investigation at Scale of Web Privacy Policy Availability
The 23rd ACM Symposium on Document Engineering (**DocEng, 2023**) [In Press]

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**)

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

Privacy Not Found: A Study of the Availability of Privacy Policies on the Web.
Symposium on Usable Privacy and Security (**SOUPS, 2020**).

Mukund Srinath.

Convolutional Neural Network and Question Generation Based Approaches to Select Best Answers for Non-Factoid Questions.
(Master's thesis, Pennsylvania State University, 2019)