

Karthik Shivaram

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in Karthik Shivaram

EDUCATION

Tulane University, New Orleans, LA

Doctor of Philosophy (PhD) — Computer Science

Aug. 2020 – May. 2022

Illinois Institute of Technology - (Transferred Out), Chicago, IL

Doctor of Philosophy (PhD) — Computer Science

Aug. 2018 – July. 2020

Illinois Institute of Technology, Chicago, IL

Master of Science (MS) — Computer Science

Aug. 2015 – May. 2017

BMS Institute of Technology, Bangalore, India

Bachelors of Engineering (BE) — Mechanical Engineering

Aug. 2009 – Apr. 2013

WORK EXPERIENCE

Tulane University, New Orleans, LA

Research Assistant

Aug. 2020 – Dec. 2020

- Developed Simulation Models to measure and analyze filter bubble formation in political news recommender systems

Pacific Northwest National Laboratory (PNNL), Richland, WA

PhD Research Intern

June. 2020 – Aug. 2020

- Developed Novel Representational Learning Method to improve Causal Inference Estimations
- Worked on employing the above method to evaluate the effectiveness of Non Pharmaceutical Interventions for COVID-19.

Illinois Institute of Technology, Chicago, IL

Teaching Assistant

Aug. 2019 – Dec. 2019

- Teaching Assistant for CS579 (Online Social Network Analysis)
- Teaching Assistant for CS115 (Object Oriented Programming 1)

Pacific Northwest National Laboratory (PNNL), Richland, WA

PhD Research Intern

June. 2019 – Aug. 2019

- Developed Causal Discovery Models to help detect the presence of existing Causal Relationships in Social Simulations.
- Helped Develop a Causal Ensemble Technique to improve causal model performance and methods to evaluate them.

Illinois Institute of Technology, Chicago, IL

Research Assistant

Aug. 2018 – May. 2020

- Worked as a Research Assistant at the Text Analysis for Public Interest Lab (TAPI)
- Analyzed and Studied the influence of Relationships in the Detection of Hostility in Online Social Networks.

Accenture Digital, Chicago, IL

Artificial Intelligence Engineer

Aug. 2017 – May. 2018

- Developed a DNA Sequence prediction application using Deep Learning Models
- Developed a Failure Detection Model for Oil Pipelines using extreme gradient boosted decision trees (XGBoost)
- Developed a Voice Interface for a Customer Service Platform using Chatbots

Datacubes Inc., Schaumburg, IL

Data Scientist Intern

May. 2017 – July. 2017

- Developed multiple Large-Scale Web Scraping Engines to extract Licensure and Permit Data for Insurance Underwriting.
- Developed and created multiple classification models for various domains to aid Risk Assessment
- Employed large scale data processing and analysis pipelines using Apache Spark.

Accenture, Bangalore, India

Software Engineering Analyst

Dec. 2013 – July. 2015

- Created an NLP Engine that performed information extraction from cybersecurity threat advisories, using semi-supervised models for pattern extraction.
- Developed a Multi-Term identifier that utilized C/NC value algorithm

RESEARCH PUBLICATIONS

Characterizing Variation in Toxic Language by Social Context

- Radfar, B., Shivaram, K. and Culotta, A. 2020. Characterizing Variation in Toxic Language by Social Context. *Proceedings of the International AAAI Conference on Web and Social Media*. 14, 1 (May 2020), 959-963.

Semi-Automated Information Extraction from Unstructured Threat Advisories

- Roshni R. Ramnani, Karthik Shivaram, Shubhashis Sengupta, and Annervaz K. M.. 2017. Semi-Automated Information Extraction from Unstructured Threat Advisories. In *Proceedings of the 10th Innovations in Software Engineering Conference (ISEC '17)*. ACM, New York, NY, USA, 181-187.
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TECHNICAL SKILLS

Languages: Python, C++, Java, Javascript, Bash

Frameworks: Tensorflow, Pytorch, Keras, Flask

Libraries: Numpy, Scipy, Pandas, NLTK, Scikit-Learn, H5py, cython, Spark

Databases: MySQL, Postgress, MongoDB

Cloud Technology: AWS EC2, AWS S3, Nervana Cloud, DigitalOcean

RESEARCH PROJECTS

Characterizing Variation in Toxic Language by Social Context

- *Studied the influence of relationships in detecting online hostility (hate speech, toxic behaviour, sexism, racism) in online social networks. (For this study twitter was used as the social network platform).*