

# ANIQUE TAHIR

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## SUMMARY

- Prolific scientist with skills and experience in Data Mining, Machine Learning, Big Data and Software Engineering.
- Led collaborative projects, resulting in peer-reviewed publications.
- Thorough understanding of (semi)supervised/unsupervised machine learning models, deep-learning, out-of-distribution inference, causal inference, uncertainty quantification, and distributed database systems.
- Self-motivated, problem-solving and collaborative scientist with excellent communication skills.

## TECHNICAL SKILLS

**Programming Languages.** Javascript/Node • Python • Java • C • C++ • C# • PHP • BASH  
**Frameworks.** jax • pytorch • tensorflow/keras • numpy • pandas • matplotlib • scikit-learn • webpack  
• Apache Spark • Hadoop • React • MapReduce • selenium  
**Utilites.** Github • Puppeteer • Docker • Nginx • qemu/kvm  
**OS/Cloud** Linux • BSD • Windows • AWS(S3, EC2, SQS) • GCP(Compute Engine, BigTable)

## EDUCATION

- PhD, Computer Science, Arizona State University, 2019-present
- MS, Computer Science, Arizona State University, 2018
- BS, Computer Science, Lahore University of Management Sciences, 2012

## EXPERIENCE

### Arizona State University

Research Assistant

Tempe, AZ

Aug 2020 - present

- Designed methods for tackling the Distributional Shift problem
- Created a method for multi-modal explainability using offline and online data from Social Media
- Funded by NSF, AFRL and ONR

### Arizona State University

Graduate Teaching Associate

Tempe, AZ

Spring/Fall 2019, Spring/Fall 2020

- Graduate Teaching Associate for CSE 340: Principles of Programming Languages
- Helped students with reinforcing course material by delivering recitation lectures
- Successfully provided a smooth transition from physical to online teaching for recitations during the COVID-19 crisis by designing web tools to accomodate students needs
- Created a Gradescope/Canvas(LMS) based autograder for C++ projects which provides instant feedback to students regarding their progress in course projects. This autograder has been in use since its creation for almost 6 semesters. Every Computer Science junior at ASU has benefited from this since its creation since the course is a requirement

### Arizona State University

Instructor - CSE 205

Tempe, AZ

Summer 2020

- Selected to instruct Computer Science students for the Summer semester during the COVID-19 pandemic based on previous record as a Teaching Assistant

### Arizona State University

CIS Research Aide

Tempe, AZ

May 2019 – Aug 2019

- Successfully implemented Deep Learning models on cloud infrastructure to predict successful and unsuccessful crowd sourced projects on the internet

### Arizona State University

Graduate Services Assistant

Tempe, AZ

May 2016 – Aug 2016

- Delivered software automation tools which used Selenium and Mechanize to mine data from the Dark Web
- Successfully led a team tasked with creating automated systems for crawling and parsing dark web data where we evolved the system to handle a large part of the dark web
- Participated in the provisional patent related to our work and one of the first people to work on the project which later became the successful startup named CRY3CON

### Sofizar/ConstellationCK

Software Engineer

Apr 2013 – Jun 2015

## PUBLICATIONS

- A. Tahir, L. Cheng, R. Guo and H. Liu, "Distributional Shift Adaptation using Domain-Specific Features," 2022 IEEE International Conference on Big Data (Big Data)
- Tahir, Anique, et al. "Improving Vaccine Stance Detection by Combining Online and Offline Data." SBP-BRIMS. Washington, DC (2022).

- Moraffah, Raha, et al. "Causal inference for time series analysis: Problems, methods and evaluation." Knowledge and Information Systems (2021): 1-45.
- Tahir, Anique, Yuhua Sun, and Mohamed Sarwat. "An Automated Framework for Explaining Facts Extracted From Mobility Datasets." 2019 20th IEEE International Conference on Mobile Data Management (MDM). IEEE, 2019.
- Yu, Jia, Anique Tahir, and Mohamed Sarwat. "GeoSparkViz in action: a data system with built-in support for geospatial visualization." 2019 IEEE 35th International Conference on Data Engineering (ICDE). IEEE, 2019.
- Alatawi, Faisal, et al. "A Survey on Echo Chambers on Social Media: Description, Detection and Mitigation." arXiv preprint arXiv:2112.05084 (2021).

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## SERVICE

- Volunteer - ASU Open Door 2023
- PC Member - AAAI 2023 Conference
- Volunteer - SBP-BRIMS 2022 Conference
- Subreviewer - SBP-BRIMS 2022 Conference
- Volunteer - WSDM 2022 Conference
- Subreviewer - SIGIR 2022
- Volunteer - KDD 2021 Conference
- Subreviewer - IEEE CogMI 2021
- Volunteer - CySIS lab - Arizona State University

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## AWARDS

- SDM 2022 Student Scholarship
- ASU SCAI Travel Award 2022
- SBP-BRIMS 2022 Travel Award

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## MENTORSHIP

- Ariz Chang
- Manlin Zhang

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## PROJECTS

My publicly available open-source projects and contributions can be found here:  
<https://github.com/aniquetahir>