

SHANNON GALLAGHER

Data Scientist, Statistician, PhD

✉ skgallagher19@gmail.com

☎ (724) 504-8990

📍 Pittsburgh, PA

💻 skgallagher.github.io

🌐 skgallagher

WORK EXPERIENCE

Data Scientist

CERT, Software Engineering Institute

📅 June 2021 – Present

📍 Pittsburgh, PA

- Led internal research project for deepfake detection using ML models
- Explored transformer ML models and data for code weakness identification
- Consulted DoD in AI/ML use in emerging technology
- Presented work at DoD conferences

transformers

PyTorch

TensorFlow

docker

Post Doctoral Fellow

National Institute of Allergy and Infectious Diseases, NIH

📅 Aug 2019 – April 2021

📍 Rockville, MD

- Led analysis for retrospective study of effect of remdesivir on COVID-19 patients in the ACTT-1 Trial
- Developed an R package, accompanying website, and manuscript studying the effect of HIV status and detection time on the probability of infection of clusters of Tuberculosis outbreaks
- Implemented and maintained an R Shiny app to aid researchers in development of malaria vaccine
- Created lecture notes and material for continuing education purposes

Parallel computing

Shiny

R

algorithms

PhD Student

Carnegie Mellon University

📅 June 2014 – Aug 2019

📍 Pittsburgh, PA

- Researched statistical relationships between compartment models and agent-based model
- Published, programmed, and refined R package `spew` and manuscript to aid researchers in creating synthetic ecosystems to improve study in infectious disease epidemiology
- Optimized code for high performance computing on a supercomputer

Graduate Intern

PNC

📅 Summer 2015

📍 Pittsburgh, PA

- Scraped and analyzed social media data for sentiment analysis to determine effect of social media engagement
- Parallelized code via Hadoop

Hadoop

sparklyr

Director's Summer Program Participant

NSA

📅 Summer 2012

📍 Fort Meade, MD

- Implemented algorithm for quantum computing resource allocation
- Presented results to Director of NSA

C++

presentations

EDUCATION

PhD of Statistics, 2019

MS of Statistics, 2015

BS of Mathematical Sciences, 2014

Carnegie Mellon University

📅 2010 – 2019

📍 Pittsburgh, PA

ACHIEVEMENTS



Nominee for Newcomer of 2022

Nominated for achievement award at Software Engineering Institute



2020 Commencement Speaker

Selected student speaker at the 2020 Conferral of Degrees.



Hackathon Champion

Developed interface for infectious disease visualization at the MIDAS MISSION Public Health Hackathon. Awarded \$3,000 prize.

SKILLS

R (Expert)

- Package creation, debugging & development
- See `EpiCompare`, `InfectionTrees`, and `spew`

PyTorch (Intermediate)

- Implemented transformers models for code weakness identification
- Developed pipeline in conjunction with Juneberry for deepfake detection

Python, Docker, bash, qsub (Intermediate)

- High performance, reproducible, and distributive computing

C++, julia, MatLab (Proficient)

- Programming experience (≥ 1 major project)

SERVICE

Reviewer

Multiple academic journals

📅 2017-Present

President

Women in Statistics at CMU

📅 2018 – 2019

📍 Pittsburgh, PA

Co-organizer

Women in Data Science @CMU

📅 2018

📍 Pittsburgh, PA