# Joseph Daws, Jr.

daws.joseph@gmail.com · joedaws.github.io
Knoxville, Tennessee

## EXPERIENCE

- **One Medical**
  Senior Machine Learning Software Engineer
  Developed, maintained, and extended machine learning services which support and automate functions in an Electronic Health Record.
  *October 2021 to present*

- **Lirio**
  Senior Machine Learning Engineer - Knoxville, TN
  Research and development of novel approaches to machine learning for behavioral change AI. Designed and developed in-house experimentation environment. Implemented core components of the training pipeline for a deep learning model.
  *April 2020 to October 2021*

- **University of Tennessee**
  Graduate Research Assistant
  Designed, analyzed, and implemented novel algorithms using approximation theory to solve a variety of problems in several application domains including image processing, signal denoising, and classification.
  *Jan 2017 to March 2020*

## EDUCATION

- **Ph.D. Mathematics**
  University of Tennessee, Knoxville
  *2020*

- **M.S. Mathematics**
  University of Tennessee, Knoxville
  *2016*

## AWARDS & RECOGNITION

- **Travel Award**
  IMI: $9^{th}$ Annual Graduate student mini-conference
  *2018*

- **Grand Prize: Ugly Data Days**
  Oak Ridge National Lab
  https://datadays.pages.ornl.gov/SNS/
  *2018*

## SKILLS

- **Technologies**
  Deep Learning, Python, C, AWS, elixir, LaTeX

- **Patterns & Practices**
  Object Oriented Programming, Functional Programming, CI/CD, containerized development

## PROJECTS

- **Automated routing of faxed documents [One Medical]**
  Used computer vision and deep learning to extract important information from incoming faxes and automatically route them to their correct final destination in an EHR.
  *Python, Terraform, AWS*

- **Limited Data Estimator [Lirio AI Research]**
  Comparison of policies for contextual bandit problems using a set of limited historical interactions.
  https://github.com/joedaws/lde2021
  *Python*

- **Experimental-framework [Lirio]**
  A configurable experimentation platform to predict performance of neural network based reinforcement learning models in production.
  *Python*

- **ASGF [Lirio AI Research]**
  A black-box optimization method for extremely high dimensional non-convex objective functions.
  https://github.com/joedaws/ASGF
  *Python*

## OTHER HIGHLIGHTS

- Gave talk on *Neural Network Architectures inspired by Polynomial Approximation* at SIAM CSE 2019.

- Enjoyer all manner of video games from competitive FPS to agriculture-simulation social net work games!

- Participated in Diversity and Inclusion team at Lirio and helped implement inclusive policies.