

## Kyle Sykes, Ph.D.

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<https://www.github.com/kylesykes>

I'm a data scientist who thrives on having a tough problem to chew on. I have a background in computational mathematics and experience working in government and healthcare industries. I have 4 years of using Python professionally for both data science purposes as well as developing production services and pipelines. I have an interest in neural networks, specifically related to image recognition problems. I've lately particularly enjoyed building, deploying, and managing data science services using Docker/Kubernetes.

I also have a passion for education. I have a background in mathematics education and have been teaching mathematics and programming to middle school kids since 2012. In my professional career, this means I thoroughly enjoy mentoring members of the team and I love finding opportunities to help my team learn, as well as utilize any opportunities to continue learning myself.

## Tools and Technologies

- Languages: Most experienced with Python, SQL. Some experience with R, Bash
- Data/Machine Learning: pandas/numpy/scipy, jupyter, scikit-learn, Keras/Tensorflow
- Web/Deployment: Docker, Kubernetes, Flask, CI/CD tools (Visual Studio Team Services most recently)
- Visualization: Tableau (including Tableau Server), PowerBI, Plotly (Dash), Bokeh
- Databases: Variety of SQL flavored databases, CosmosDB (Table and MongoDB APIs), Elasticsearch

## Work Experience

*Apr 2017 - Present*

**Senior Data Scientist** at Allscripts (formally CareOtter)

As a senior data scientist at Care Otter, I have been involved in a large number of projects leading up to and after the release of our teams product, Avenel. Avenel is a cloud based EHR developed as a native iOS app with bits of machine learning built in to assist doctors as they treat patients. It was built from the ground up with data science as an active participant, which has enabled some great progress.

I've done plenty so far while here and the list just keeps on growing! So far I've managed to...

- Setup and maintain the data science infrastructure on Azure
- Created robust Python library to authenticate and interact with Avenel backend REST services
- Develop multiple production web applications using Flask
- Manage deployments of data science services using Docker containers hosted with Kubernetes
- Develop and manage the ingestion pipeline of clinical information from our initial client's Microsoft SQL Server to Azure CosmosDB
- Maintain the machine learning service behind our app, Postulate, which highlights clinical items that are relevant to the provider
- Setup the infrastructure to parse mobile events from logs for Mobile Analytics purposes
- Develop Meaningful Use calculations and reports which led to a successful certification of our product
- Provide guidance, education, and assistance to junior members of the team where possible on their various projects (and get just as much!)

*Jun 2016 - Apr 2017*

**Data Scientist** at Federal Government

Worked on a variety of projects, and while I can't go into detail about them because of the nature of the work, I'll give a high level overview of what sorts of things I did while employed by the Federal Government.

- Analyze data routinely from a variety of sources using R and Python and prepared and present findings to leadership at various levels

- Work with internal web traffic logs routinely to determine user behaviors and trends using Adobe Analytics
- Administrate an instance of Tableau Server for myself and several other offices while also routinely developing my own Tableau visualizations for customers
- Involved in setting up and managing cloud infrastructure (both AWS and OpenStack) for my team
- Introduce Docker into several colleague's workflows
- Presented and participated in weekly "Python Parties", which served to help more people in the workforce learn and utilize Python for their projects as well as introduce helpful packages

*May 2014 - Jun 2016*

**Data Science Intern** at Federal Government

## Education

*2013–2016*

**Ph.D. Mathematics**, Saint Louis University, St. Louis, MO.

- Dissertation, The Burn Axis and Related Properties

*2011–2013*

**M.A. Mathematics**, Saint Louis University, St. Louis, MO.

*2008–2011*

**B.S. Mathematics Education**, SIU Edwardsville, Edwardsville, IL.