

Sean Cooke

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[LinkedIn](#) | [GitHub](#) | [Personal Website](#)

Skills

- Machine learning engineer with 5+ years of experience as a full-stack software engineer
- Experience working with
 - Programming Languages: Python (Jupyter, Pandas, scikit-learn, Matplotlib, pytest), JavaScript, PHP, Java
 - Databases: Snowflake, Oracle SQL, MySQL
 - Infrastructure: Linux, Bash, AWS, Git, Airflow, Apache, Tableau
 - Project Management: Agile Scrum, Kanban, Jira, Confluence
- Skilled in Machine Learning, Data Pipelines, Data Visualization, Big Data, and Cloud Computing

Experience

athenahealth *Watertown, MA*

Data Analyst

March 2020-Present

- [Coauthored published research](#) in top cardiology journal showing addition of Apple watch atrial fibrillation detection software did not increase AFib claims using Difference-in-Differences Estimation
- Prioritized rollout of feature that alerts doctors to wear PPE when seeing patients who may have been exposed to COVID by ranking 16k hospitals by number of COVID patients using Snowflake and Pandas
- Reduced Filecloud storage by 30% (17 TB/year) by showing Product Owners many old documents were being imported. Created probability density plot of 'document age at time of import' using Matplotlib

Data Engineer

May 2018-March 2020

- Reduced daily extract failures from 677 to 5 in 1 month through SQL optimization by leveraging indexes and limiting cross-joins. Helps prevent EHR outages for hospitals by decreasing ETL job failures
- Migrated revenue reporting machine learning model from DC/OS to AWS by using newly created AWS RDS, S3 instances; cost savings of \$120k/year

University of Rochester Medical Center *Rochester, NY*

Software Engineer

June 2014-April 2018

- Architected, implemented, and supported urattendance.urmc.rochester.edu, an attendance tracking website for 1k medical residents and fellows; allowing physicians more time with patients by reducing admin time by 2 hours per meeting
- Allowed high school students to apply for medical school summer programs online by replacing paper applications with mobile-friendly [STEP Application](#) and [SURF Application](#) using JavaScript and PHP
- 2017 Meliora Award nominee for years of outstanding service and organization contributions; highest honor awarded to staff members; 5 time Strong Star recipient for outstanding software engineering

Independent Projects

titanic

www.github.com/SeanCooke/titanic

- Feature Engineering and XGBoost classifier achieves 86% accuracy on survival from Titanic Data Set

Tumor Classification

www.github.com/SeanCooke/tumor-classification

- Random forest classifier achieves 96% accuracy on diagnosis from Breast Cancer (Wisconsin) Data Set

Education

University of Rochester *Rochester, NY*

August 2015-May 2017

- Master of Science in Computer Science; GPA 3.46

SUNY Geneseo *Geneseo, NY*

January 2011-May 2014

- Bachelor of Arts in Mathematics, Minor in Computer Science; Dean's List Spring 2014