Matthew A Sochor, PhD

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SKILLS

Languages: Python, R, SQL, Java

Big Data Technologies: AWS, Docker, Kubernetes, Hadoop, Spark, Hive, Pig

EDUCATION

University of Pennsylvania, Philadelphia, PA — Jun 2008 – Mar 2014
PhD in Biochemistry and Molecular Biophysics

Cornell University, Ithaca, NY — Sep 2002 – Jun 2006
BS in Applied and Engineering Physics

EXPERIENCE

Progressive Insurance — Nov 2019- Present
Sr Manager of Data Science

Manage the Customer Relations Management Data Science team. We are responsible for ML and AI based solutions to help customize and improve Progressive customer's experiences.

Our team's responsibilities range from consulting on business problems, research and development of solutions, productionizing models using cloud infrastructure, consultation on test design to measure model effectiveness, and long term maintenance and monitoring of model performance. I have expanded the capabilities of the team to include continuous model deployments, automated monitoring, and real time model API deployments.

I continue to advise on an inner source project to enable git and python development throughout Progressive and am an advisor for our inner source project to enable AWS usage for data science research and production deployments of models.

Progressive Insurance — Oct 2018- Nov 2019
Manager of Data Analytics

Manage a data analyst team overseeing the Injury agenda for the Claims Control organization. My work on this team included onboarding and training a team of 5 data analysts to use git based version control and GitHub, creating a platform for python and git installation on Progressive computers which has been used across the company, fully automating our monthly reporting to open analysts to new work, and taking on many long standing questions in the injury agenda the team had previously never been able to answer.

Progressive Insurance — Sep 2016- Oct 2018
Lead Data Scientist

Algorithm development for usage based insurance (Snapshot) program to use mobile and on-board telematics data to predict individual driver risk. Researched and productionized the first model incorporating distracted driving as a predictor of loss.

I also created and inner sourced a Kubernetes based big data processing platform that allowed for overnight processing of TB scale data. This work enabled rapid telematics research.

Created an inner source project to allow non-technical users easily rent and access on-demand EC2 instances. This work is still used by hundreds of data scientists and data analysts across Progressive.

Mobile Defense Aug 2015- Sep 2016

Data Scientist

Built machine learning models to predict battery decay and mobile app resource usage for a mobile app, Pocket Geek.

The Data Incubator Mar 2015- May 2015

Data Scientist Fellow

Selected from over a thousand applicants to participate in a rigorous two month data science fellowship program.

Center for Retinal and Ocular Therapy Mar 2014- Aug 2014

Post-Doctoral Researcher, University of Pennsylvania

Applied PhD work to regulate GFP in mouse retina using oral delivery of a sugar.

Lewis Laboratory Mar 2009- Mar 2014

Graduate Student, University of Pennsylvania

Modeled mutants of the lac repressor from *E. coli* and re-wired to build a self-regulating gene delivery system for ocular gene therapy.