AMY SILLMAN, PHD

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EXPERIENCE

Metis · San Francisco, CA - Remote   Jan. 2021 to Mar. 2021
Data Scientist

Metis is an ACCET accredited 12-week immersive data science bootcamp. Designed and delivered five projects covering statistical modeling, data visualization, machine learning, and app development. See projects section.

Sillman Consulting, LLC · San Francisco, CA   2011 to Current
Scientific Consultant

Independent consulting service offering scientific writing, editing, literature review, assay design, support, and advising services to clients in the areas of biotechnology, biomedicine, pharmaceuticals, and gifted and talented education.
Clients include: Pathway Therapeutics, Center for Excellence in Education, and Esri Press

Massachusetts Institute of Technology   Jan. 2017 to Aug. 2020
Director, Research Science Institute (RSI)

RSI is the premier summer STEM research program for gifted and talented high school students. Organized selection committee process and application reading and Selected and managed program staff of 25.
- Secured research projects for 80-85 US and international high school students at MIT, Harvard, Northeastern University, and other universities and private companies in the Boston-Cambridge area
- In 2020, directed the first ever all-online RSI during the COVID-19 pandemic. Led the program for 86 students spread across 3 continents and 16 hours of time zones

Dammam, Kingdom of Saudi Arabia   Jan. 2015 to Nov. 2016
Director, Saudi Aramco Research Science Initiative

Created Saudi Aramco Research Science Initiative for Girls, the first summer STEM research program for gifted high school girls in Saudi Arabia. Organized the program schedule within the constraints of Ramadan and daily religious observances; hired and managed American program staff of 12
- Advised on travel and cultural concerns; directed daily program operations at three separate sites
- handled on-site staff issues; mentored tutorial staff and dealt with student academic, disciplinary, and mental health concerns.

Exelixis, Inc.   May 2007 to May 2010
Research Scientist II, Molecular & Cellular Pharmacology

Led development and validation of NK cell cytotoxicity assays for PI3Kdelta and inflammation drug discovery programs. Managed PBMC Clinical Pharmacodynamic Biomarker Group, including 4 Research Associates.
- Supported Translational Medicine Department by validating and implementing biomarker assays for analysis of clinical pharmacodynamics samples (fixed blood, fixed bone marrow aspirate or peripheral blood mononuclear cell lysate) from 9 of Exelixis's oncology clinical trials

University of California Davis · Davis, CA   Mar. 2000 to June 2003
Postdoctoral Scholar

Conducted cell biology research: reactive oxygen signaling in migrating human epidermal keratinocytes, galvanotaxis studies in keratinocytes and dermal fibroblasts.

University of California San Francisco · San Francisco, CA   Aug. 2003 to Dec. 2006
Postdoctoral Scholar-Fellow

Cell biology research: growth factor signal transduction, pH sensitivity of cytoskeletal protein regulators, sodium-proton exchanger interaction with the cytoskeleton.

Massachusetts Institute of Technology   Jan. 2017 to Aug. 2020
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DATA SCIENCE PROJECTS

Sentiment Analysis of Pharmaceutical Company Press Releases
NLP topic modeling and sentiment analysis of press releases from pharmaceutical companies.

Topical Exploration of Hunger Games Fan Fiction
NLP topic modeling of Hunger Games fan fiction literature

Encouraging Vaccination Compliance: A Model to Target Non-Vaccinators
Modeling of who is likely to decline seasonal flu vaccination, based on demographic and behavioral data.

A Model to Set Rents in San Francisco
Linear regression modeling of rents in the city of San Francisco, based on data scraped from Craigslist.

NYC MTA Project: Strategy to Identify MTA Stations to Target for Marketing Campaign
Group project at Metis data science bootcamp to identify and prioritize MTA stations and days of the week that would be advantageous to target for a marketing campaign.

SUMMARY

Data scientist with domain knowledge in immunology, cell biology, oncology drug discovery, drug target identification and strategy, and biomarker assay development for inflammation and oncology drug discovery programs, and clinical trials. Experience working in teams and managing direct reports.

SKILLS

LANGUAGES AND TOOLS	MACHINE LEARNING	VISUALIZATION
Python	Regression Modeling	Tableau
pandas	Supervised Learning	Seaborn
Numpy	Unsupervised Learning	Matplotlib
SQL	Neural Networks	
Scikit-learn	Predictive Modeling	
Git	Hypothesis Testing	
BeautifulSoup		

EDUCATION

Metis
Live Online Beginner Python and Math for Data Science

University of Pennsylvania School of Medicine
Ph. D. Immunology
Research work in B cell development and antigen receptor signal transduction. Dissertation title: Studies of protein tyrosine kinase involvement in B lymphocyte antigen receptor-initiated signaling.

Harvard College
A. B. Biochemical Sciences
Senior Thesis research in cell biology: contributed to the gene sequence of Drosophila alpha-spectrin cytoskeletal protein.

AWARDS

Exelixis, Inc · EXELence Award
Recognized for work in clinical pharmacodynamic assay development and implementation.

NIH/NIDCR · Training Fellowship   2003
Fellowship awarded for work in cell biology research at the University of California San Francisco.

Dermatology Foundation ·
Dermatology Foundation Research Fellowship (declined)
Fellowship to continue work in dermatological cell biology research at UC Davis. I declined, as I was moving to UCSF later that year, and was not permitted to take the fellowship award with me to the new research laboratory.

Harvard College ·
Elizabeth Cary Agassiz Certificate of Merit
Academic honors