

James A. Gilbert, III

DATA SCIENTIST

I'm drawn towards roles that require acute attention to detail and necessitate continuous improvement. I have a proven track record of producing and analyzing data as a researcher and quality control analyst in the pharmaceutical industry. As a data scientist I apply the same passion to helping businesses understand their past data to pivot in the present and plan for the future.

EXPERIENCE

Nashville Software School—Data Science Apprenticeship

AUGUST 2021 - PRESENT

Intensive part-time bootcamp focusing on data science fundamentals and problem solving.

- Used real-world datasets and included projects where findings were presented to stakeholders from the community.
- Wrangled data and performed exploratory data analysis using Python's *pandas* library and R's *tidyverse* packages
- Created data visualizations using *matplotlib*, *seaborn*, and *ggplot2*
- Performed geospatial analysis using *geopandas* and *folium*
- Gathered data through APIs and web scraping
- Retrieved and analyzed data using PostgreSQL and *sqlalchemy*
- Built and evaluated statistical and machine learning models using the *scikit-learn* and *statsmodels* libraries
- Applied natural language processing using the *nltk* and *spaCy* libraries
- Performed network analysis on graph data using Neo4j
- Built and deployed interactive data visualizations using the R *Shiny* library
- Source code version control with Git/GitHub
- Project management/tracking with GitHub project boards and issue tracking
- Interacted with AWS using the CLI and ssh

August Bioservices, Nashville, TN—Microbiology QC Analyst II

SEPTEMBER 2015 - PRESENT

- Analyzed data by linear and non-linear regression using GraphPad Prism and prepared visualizations for client projects, stakeholder presentations, and marketing materials
- Performed linear regression using Excel to assess protein characteristics
- Coordinated disinfectant efficacy studies, performed environmental monitoring, and identified and characterized organisms detected in controlled manufacturing facilities. Analyzed data to determine if any monitoring is Out of Spec/Out of Trend (OOS/OOT)
- Generated a stable cell line of a mammalian neurotransmitter, maintained protein quality control documents for proteins
- Independently developed and optimized *E. coli* protein expression, purification and analytical assays
- Designed screens for fragment based drug discovery, including SPR, ELISAs and ITC

Nashville, TN

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DATA ANALYSIS & VISUALIZATION SKILLS

Python – Pandas, NumPy, matplotlib, seaborn, geospatial models, SciPy, scikit learn, Plotly, webscraping

R – ggplot2, tidyverse, dplyr, RShiny

SQL – PostgreSQL, SQLAlchemy, SQLite

GraphPad Prism

Master Control (QMS)

Excel

EDUCATION

Nashville Software School,
Nashville, TN – Data Science
Bootcamp

Vanderbilt University Medical School, Nashville, TN — Master's
of Laboratory Investigation

Vanderbilt University, Nashville,
TN— B.A. Ecology Evolution and
Organismal Biology

Vanderbilt University Medical Center, Department of Pharmacology,
Nashville, TN— *Research Assistant III*
NOVEMBER 2010- SEPTEMBER 2015

- Prepared published visualizations of protein molecular structures using python (PyMol)
- Developed a Chimeric G-Protein subunit for analytical protein kinetic studies
- Constructed a colorimetric assay to detect phosphate generation as a method to study protein kinetics

Vanderbilt University, Department of Neuroscience, Nashville, TN—
Research Assistant I
NOVEMBER 2009 - NOVEMBER 2010

- Performed mouse cranial dissections and other mouse surgeries
- Isolated RNA, and generated cDNA by PCR to study RNA editing by ADAR1

SELECTED PROJECTS

Group Projects

[Using R Shiny to Audit Banks](#) – Using APIs, webscraped data from the HMDA website and characterized regions in the Pacific Northwest to facilitate audits of discrimination in mortgage loans for Houser Jones & Sas.

ACCURE – analyzed the performance and trends of a system scheduler to discover why timeouts were occurring for the Vanderbilt Advanced Computing Center for Research and Education

[Hop Teaming Analysis](#) –Using the Hop team dataset, taxonomy codes, and NPES data, we analyzed the relationship between healthcare providers and the hospital systems they refer to and presented our findings to Healthcare Bluebook.

Solo Projects

[Effects of short term rentals on Nashville Neighborhoods: Analysis of Code Violations](#) – Analyzed the relationship between short term rentals and property code violations in the Nashville metropolitan area using RShiny. Discovered that East Nashville has the highest rate of code violations per short term rental.

ACADEMIC & RESEARCH PUBLICATIONS

[Gβγ directly modulates vesicle fusion by competing with synaptotagmin for binding to neuronal SNARE proteins embedded in membranes](#)

[A conserved phenylalanine as relay between the α5 helix and the GDP binding region of heterotrimeric Gi Protein α subunit.](#)

[Reovirus-mediated induction of ADAR1 \(p150\) minimally alters RNA editing patterns in discrete brain regions](#)

[Linking receptor activation to changes in Sw I and II of Gα proteins.](#)

[Myristoylation exerts direct and allosteric effects on Gα conformation and dynamics in solution.](#)