ASHA MAHESHWARI

DATA SCIENTIST + RESEARCHER

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I am an experienced and multifaceted professional with a proven track record of producing and analyzing data as a researcher and Scientist I in the pharmaceutical industry. As an aspiring data scientist, I apply the same passion to helping businesses understand their past data to pivot in the present and plan for the future.

EXPERIENCES

Nashville Software School - Data Science Apprentice
September 2022 - Present
Intensive 9-month part-time bootcamp focusing on data science fundamentals and teaching skills to solve real-world business challenges.

- Wrangled data and performed exploratory data analysis using Pythons' pandas library and R's tidyverse packages
- Performed geospatial analysis using geopandas and folium
- Created data visualizations using matplotlib, seaborn, plotly and ggplot2
- Created interactive maps using leaflet
- Gathered data through APIs and web scraping
- Retrieved and analyzed data using PostgreSQL
- Built and evaluated statistical and machine learning models using the scikit-learn and statsmodels libraries
- Built and deployed interactive data visualization and map using the R Shiny library
- Applied natural language processing using the nltk and spaCy libraries
- Working Experience with Alteryx Designer
- Project management/tracking with GitHub project boards and issue tracking

August Bioservices, Nashville, TN - Scientist I
(Former PMI Biopharma Solutions LLC)
May 2018 - April 2022

- Worked in collaborative research setting with other scientists and research associates and interfacing with other divisions
- Analyzed data by linear and non-linear regression using GraphPad Prism and prepared visualizations for client projects, stakeholder presentations, and marketing materials
- Effectively communicated results and findings to the clients through meetings and presentations
- Authored research proposals, technical reports, SOP's and process description documents
- Lead project focused on mammalian transient and stable monoclonal protein expression, cell line characterization, living cell assay development, ELISA development, fluorescence, and drug discovery target validation
- Managed the design, development and execution of multiple protein purification and characterization projects in both bacterial and mammalian expression platform
- Designed screens for fragment-based drug discovery and target validation, including SPR and ELISAs

DATA ANALYSIS & VISUALIZATION SKILLS

Python - *Pandas, NumPy, matplotlib, seaborn, Plotly, geospatial models*

R - *ggplot2, tidyverse, dplyr, RShiny*

SQL - *PostgreSQL, SQLAlchemy, SQLite*

GraphPad Prism

Master Control (QMS)

Data Visualization

Data Wrangling

Web scraping

Machine Learning

NLP

Alteryx

Microsoft Office (Excel, Powerpoint, Word)

EDUCATION

Data Science Apprenticeship
Nashville Software School
Nashville, TN
(Anticipated graduation — June 2023)

Ph.D. Biological Sciences
Tennessee State University
Nashville, TN

MS Biotechnology
University of Mumbai
Mumbai, India

BS Biotechnology
University of Mumbai
Mumbai, India

Tennessee State University, Nashville, TN - Graduate Research Assistant
September 2014 - December 2018

- Analyzed data using SAS and GraphPad prism and published the research findings in scientific journals
- Studied phylogenetic diversity of microorganisms in flowering dogwood in different location of Tennessee
- Investigated anti-tumorigenic and mechanistic effects of fungal metabolites on brain and lung cancer cell lines
- Studied effects of bacterial volatile compounds on growth promotion of Arabidopsis thaliana, tomato, and pepper plants
- Trained in mammalian cell culture techniques, antimicrobial testing, enzyme assays, plant tissue culture, and plant pathology techniques. Skilled in aseptic techniques and working in BSL2 laboratory
- Received Outstanding Graduate Student Award for 2018; award to recognize hard work, innovation, accomplishment, creativity, and leadership displayed during doctoral studies

BERG LLC, Nashville, TN - Research Intern
May 2017 - August 2017

- Worked in a collaborative environment with other scientists, research assistants, as well as independently
- Received formal training in recombinant protein expression and purification of native, his tagged and Fc tagged proteins on AKTA platforms
- Skilled in performing techniques like transformation, plasmid preparation, SDS PAGE, BCA assay, Western Blot, and activity assays
- Maintained detail record of all protocols, conducted literature review, have experience in troubleshooting

SELECTED PROJECTS

Group Projects

- Vanderbilt ACCRE project - Analyzed the user memory needs to understand future hardware purchases and made recommendation about resource provisions *(Tech used: Python)*
- Davidson County Affordable Housing Development project - Analyzed and developed statistical model to assess the impact of LIHTC projects on nearby property values *(Tech used: R and RShiny)*
- Lahman Baseball - Analysis of baseball database consisting of 20 tables and over 100 years' worth of data *(Tech used: SQL)*

Solo Project

- Factors affecting Metropolitan Nashville school enrollment rates – Analyzed the school enrollment trends for Metropolitan Nashville schools using RShiny. Discovered that enrollment rates are declining for public schools whereas increasing for charter schools *(Tech used: Python, R and RShiny)*

RESEARCH PUBLICATION

Maheshwari A. and Mmbaga M., Endophytic Fungi Residing within Cornus Florida L in Mid-Tennessee: Phylogenetic Diversity, Enzymatic Properties, and Potential Role on Plant Health. Fungal Ecology 2023 (In press)

Maheshwari A., Mmbaga M., Bhusal B., and Ondzighi-Assoume C. (2021). Effect of Volatile Compounds Produced by Selected Bacterial Endophytes in Promoting Plant Growth. Hortscience 56(10)1175–1182

Maheshwari A., Mmbaga M., and Quincy Q. (2018). Nigrospora sphaerica products from the flowering dogwood exhibit antitumorigenic effects via the translational regulator, pS6 ribosomal protein. Proceedings of Anticancer Research. 2. 10.26689/par.v2i3.358

Mmbaga M., Gurung S. and **Maheshwari A.** (2018). Screening of Plant Endophytes as Biological Control Agents against Root Rot Pathogens of Pepper (Capsicum annum L.). Journal of Plant Pathology & Microbiology. 09. 10.4172/2157-7471.1000435

AWARDS & ACCOMPLISHMENTS

Employee of the year (PMI Biopharma Solutions LLC, 2019)

Outstanding Graduate Student Award (Tennessee State University, 2018)