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WORK EXPERIENCE

BERG LLC, Framingham, MA

Data Scientist III

Nov 2019 - present

Datasets: longitudinal high-throughput multi-omics, NGS, post translational modifications, EHR, molecular assay

Tools: R, RStudio, R Shiny, tidyverse, git, linux, xgboost, glm, ggplot2, caret, Keras, postman, Azure

- Implemented standardized data pipelines to ingest and process data from external vendor APIs, MySQL databases, publicly available resources and webpages, and open databases using R, Python, cron, Linux.
- Performed statistical data analysis in R on biological datasets to reveal actionable insights into disease models resulting in development of molecular assays, project funding, publications, and conference posters.
- Developed machine learning solutions using random forests, SVMs, penalized regressions, and deep neural networks in R and Python to facilitate data driven decisions.
- Developed dashboards and visualizations in R using RShiny and ggplot2 for internal use and publications.
- Communicated insights to data scientists, clinicians, senior leadership, and scientific teams via presentations and reports.
- Developed, documented, and maintained R packages and linux shell scripts to fill Analytics team needs.
- Supported internal scientific and omics teams by understanding requirements and conducting data experiments.
- Collaborated with external software engineering and data science teams as well as interacted with external cloud and technology vendors to communicate requirements.

Interim Linux System Administrator

Mar 2021-Mar 2022

Tools: ganglia, cron, ssh, linux, mpi, slurm, fstab

- Provided support to analytics team by managing software stack of internal production servers and onsite HPC cluster.

Marcus Institute for Aging Research, Hebrew SeniorLife, Roslindale, MA

Junior Data Scientist / Co-op Student

July 2018 - Dec 2018

- *AD Supplement:* - Performed regression analysis and hypothesis testing on clinical trials data using R and SQL.
- Actively communicated results to directors and researchers.
- *Smartphone Lab:* - Built data processing pipelines for time-series sensor data using R and SQL.
- Improved data processing speeds by upto 13%.
- *shinyMRI:* - Built scalable R shiny application to visualize 3D and 4D MRI images.
- Improved diagnosis speed for in-house Alzheimer's research.
- Application received honorable mention by RStudio, Inc.

EDUCATION

NORTHEASTERN UNIVERSITY, Boston, MA

Khoury College of Computer Sciences, GPA: 3.79/4.0

Sept 2017 - Aug 2019

Master of Science in Data Science

Related Courses: Supervised Machine Learning; Unsupervised Machine Learning and Data Mining;

Data Visualization; Natural Language Processing; Statistics for Bioinformatics; Algorithms

TA positions: Data Management in R (Spring 2019); Unsupervised Machine Learning (Summer 2019)

ALLIANCE UNIVERSITY, Bengaluru, India

College of Engineering and Design, CGPA: 3.4/4.0

Aug 2013 - June 2017

Bachelor of Technology in Computer Science and Engineering

Related Courses: Data Mining and Data Warehousing; Big Data Analytics; Design and Analysis of Algorithms

PUBLICATIONS

- (Co-author) Kiebish, M.A., Tekumalla, P. et al. Clinical utility of a serum biomarker panel in distinguishing prostate cancer from benign prostate hyperplasia. Sci Rep 11, 15052 (2021). <https://doi.org/10.1038/s41598-021-94438-4>
- (Co-author) Miller, Gregory M., et al. "Ondansetron use is associated with lower COVID-19 mortality in a Real-World Data network- based analysis." medRxiv (2021).
- (Co-author) Moser, A. J., et al. "1485P Identification of novel protein biomarkers for FOLFIRINOX-based chemotherapy response in advanced pancreatic adenocarcinoma using patient omics and Bayesian AI." Annals of Oncology 32 (2021): S1094.

RELEVANT PROJECTS

CardinalVis - Dynamic data visualization for Mass Spectrometry Imaging (MSI) experiments May 2019 - Aug 2019

Project Repository: <https://github.com/kuwisdelu/CardinalVis/>

- Created R shiny dashboard and modules in R.
- Application is open-sourced and intended to cut down research times in MSI experiment research.

MURA - Bone X-ray image classification and data visualization project

Jan 2019 - Apr 2019

Website: <http://ec2-3-212-216-62.compute-1.amazonaws.com/>

- Trained and tuned several classification models using sklearn and PyTorch in Python.
- Obtained best models for each classified using Cohen's Kappa metric.
- Created RESTful API service to provide real-time classification and dynamic visualizations using Flask-RESTful in Python.
- Deployed application, models, and visualization to AWS EC2 instance.

NL2code - Natural Language to Python code generator

Jan 2018 - Apr 2018

Project Repository: <https://github.com/darkestfloyd/NL2code>

- Scraped open-source Python repositories to gather training data using BeautifulSoup in Python.
- Trained custom neural translation system using Theano in Python.
- Improved accuracy and BLUE score over base paper.

Flashlight - Real Estate Property Assessment Visualization for the City of Boston

Oct 2017 - Dec 2017

- Created dashboard to visualize various aspects of real estate assessment values using R "Shiny" and Leaflet in R.
- Geocoded missing coordinate values using Open Address dataset and Google Maps Geocode API in Python.
- Created Python scripts to automate conversion of Zillow's shapefiles to GeoJSON format and gathering of meta-data.

Movie Recommendation System

Apr 2017 - June 2017

- Implemented a Recurrent Neural Network using TensorFlow in Python to recommend movies to a user. By analysing the sequence of movies reviewed, we were able to achieve high scores in peer review.

HONORS AND ACHIEVEMENTS

- Panelist for Northeastern University UNCOVER COVID datathon. Sep 2020
- Presented *MURA visualization tool* at The Northeastern University Visualization Consortium. Apr 2019
- Honorable mention for *shinyMRI* by RStudio. Apr 2019
- Graduate speaker for TechTalks at Grad TechDay, Khoury College. Mar 2019
- Coordinated and organized CodeWars, a 24-hour hackathon as part of university fest at Alliance University. Oct 2015