GURKAMAL DEOL

Data Analyst / Bioinformatician

@ gdeol4@uwo.ca   % www.gurkamal.com   in /gurkamal-deol-508675174   ○ github.com/gdeol4

EXPERIENCE

Bioinformatics Data Analyst (co-op)
Cyclica

📅 April 2019 – August 2019   📍 Toronto, Canada

- Wrote an ETL pipeline in python utilizing Pandas, Numpy, and RD-Kit to perform molecular pre-processing, sanitation, and similarity searching.
- Analyzed molecular data using various statistical measures to derive insight useful to industry partners.
- Collected information for over 17 million molecular compounds to create a private database removing the need to rely on commercial equivalents.
- Created and maintained a database of 300 million rows using PostgreSQL to be used internally and possibly as a platform feature.
- Utilized Google's Compute Engine virtual machine to build, perform machine learning tasks on, and query a large SQL database.
- Built and monitored indexes to bring down processing times from minutes to seconds to increase usability.
- Wrote complex SQL queries using complex joins, grouping, aggregation, nested subqueries to pull specific records with greater efficiency.

Research assistant
Western University

📅 April 2016 – July 2017   📍 London, Canada

- Thesis Project: Detecting Prostate Cancer Using Tumor-Activatable Minicircles Encoding the Biomarker SEAP.
- Data collection using: Bioluminescence imaging of cells; Western blotting;BCA assays; Immunocytochemisty; PSA testing-ELISA kit.
- Producing Minicircles - Steps include transgene cloning,DNA extraction / isolation; cloning, plasmid purication.

EDUCATION

Master's Degree - Bioinformatics
The University of Guelph

📅 August 2019

Bachelor's Degree - Genetics
The University of Western Ontario

📅 June 2017

Deep Learning Specialization
Coursera

📅 August 2019 - Present

SKILLS

Robotic Process Automation
- UiPath, Blue Prism, Selenium, Amazon Lex, Dialogflow

Languages and Tools
- Python, R, SQL, Bash, UNIX, PostgreSQL, Virtual Box, Github, Google Compute Engine

Machine Learning Frameworks
- Pytorch, Scikit-learn, Keras, Caret, CUDA

Data Analysis
- Pandas, Numpy, Tableau, Plotly, Hadoop Ecosystem

PROJECTS

An NLP-based Chatbot for Browser Voice Capture
- Built AWS Lex chatbot and integrated AWS Lamba function to validate user input, created an alias, and published the chat bot.
- Wrote a script to allow microphone access using the MediaDevices API and the Web Audio API to process the audio stream and record and export the audio to Lex using the PostContent API.

An NLU Movie Chatbot Web App
- Deployed a Dialogflow chat bot which utilized the OMDb API as a Flask web app with a Bootstrap and JQuery UI.
- Integrated a webhook to detect movie keywords, query OMDb, and return results back to Dialogflow using Ngrok

Building a Biological Dataset With UiPath
- Implemented End to End Robotic Process Automation (RPA) using UiPath.
- Used UiPath Orchestrator for deployment, monitoring and management of UiPath robot automation activity.
- Automated workflow to extract specific text and images from biology research papers, as well as images using OCR and screen capping.

Automated Testing for Amazon Web App
- Performed tests for Amazon's add and remove item from cart functionality using a Selenium WebDriver Python script.
- Wrote unit tests in Python to refactor automation code, and used *Html-testRunner* to generate HTML reports.