OWAIS A. SHAHZADA

Leesburg, Virginia 20176 • (703) 870-4199
shahzadaoa@gmail.com

Education

Bachelor of Science: Bioinformatics |Graduated: December 2020
Virginia Commonwealth University, Richmond Virginia

Work Experience

General Dynamics Information Technology | Rockville, MD
Bioinformatics Engineer Co-op, 06/2019 – Present

ISB-CGC Cloud Resource Project
- Created an ETL framework for multiple Variant Call Format (VCF) files to be loaded on to Google Cloud BigQuery as one big table that contains many VCF files from Genomic Data Commons (GDC).
- Updated and created python jupyter notebooks for ISB-CGC.
- Architected, prototyped and implemented a full-fledged ETL pipeline to take 10+ terabytes of Variant Call Format (VCF) files from Google Cloud Storage buckets hosted by Genomic Data Commons and upload them to Google BigQuery. The pipeline was designed and tested all on the Google Cloud Platform. Optimized BigQuery ETL pipeline in Python for scientists to deliver a low-cost alternative to a costly Cloud Dataflow pipeline.
- Contribute to documentation, testing, and implementation of new features, updates, and scripts of ISB-CGC's ETL pipelines.
- Actively worked with researchers to store and manage their data on ISB's cloud-hosted datasets and introduce Google's cloud platform to the research community.
- Supported scientists by communicating, optimizing and debugging Google Cloud, R and Python solutions

Research Experience

VIP_Natural Learning Process | Virginia Commonwealth University
Programmer, 01/2019 – 05/2019
- Created a text processing and learning framework to support the training and application of highly predictive NLP models.

VIP_Nanomedicine | Virginia Commonwealth University
Research Assistant, 01/2019 – 05/2019
- Design and synthesis of engineered exosomal nanoparticles. Targeted and controlled drug delivery to adipocytes using polymer and lipid nanoparticles.

Skills

Computing | Java, Python, SQL, HTML, CSS, Blast, Linux, BeautifulSoup4 Git Version Control, HTSeq, Pandas, NumPy, HHPRED, Matplotlib, BRAT, BioPython, Dask, VCFTools, SamTools, SRATools, Conda, BamTools, Google Cloud Platform, PySpark, Apache Spark, BigQuery, Google Kubernetes Engine, Google Cloud Storage
Wet/Dry Lab Techniques | Genome Annotation, Journal Annotation, Cell Passage, Cell Feeding, Centrifuge, Pipette, Autoclave
Digital | Adobe Photoshop CC, Adobe InDesign CC, Adobe Illustrator CC, Adobe Premier CC
Languages |Bengali**:** Conversational, Urdu: Conversational, Hindi: Conversational

Affiliations

Pi Lambda Phi | Virginia Commonwealth University
Brother, 08/2018 – 05/2020

Society of Bioinformatics | Virginia Commonwealth University
Member, 08/2017 – Present
Historian, 08/2018 – 05/2019