

## TECHNICAL EXPERIENCE

**Associate Specialist** **Oct 2022 — Present**  
*UCSF* *San Francisco, CA*

- Leading the end-to-end development of pretraining a transformer-based deep learning model to learn the relationship between DNA sequence and chromatin confirmation (ATAC-seq) utilizing PyTorch and AWS SageMaker.
- Achieved nearly 90% accuracy by finetuning my model in identifying transcription factors' binding sites on DNA, crucial for understanding gene regulation.
- Trained model to predict colocalization of transcription factors, Enhancing the understanding of gene regulation and its impact on diseases.

**CGHE Scholar** **Jun 2021 — Aug 2021**  
*University of Virginia* *Remote (originally Rwanda)*

- Awarded the Center for Global Health Equity grant to lead various projects at a hospital in Kigali, Rwanda.
- Led the development of a hospital simulation model to replicate patient flow and perform stress tests, identifying significant bottlenecks in the admittance process.
- Developed an advanced technique for extracting key details, such as drug names, from paper medical records using YOLO for text segmentation and LSTMs for drug sequence analysis, enhancing medical documentation and patient care.
- Strengthened relationships with CHUK students and healthcare providers.

**Devops Intern** **May 2020 — Aug 2020**  
*ResMed (Propeller Health)* *Madison, WI*

- Improved our company's systems by managing various infrastructure projects on Amazon Web Services (AWS), including Lambda, EC2, S3, IAM, Cloudwatch, Cloudtrail, and ECS, enhancing my expertise in AWS products.
- Created an automated alert system that notifies us via Slack of AWS service failures, enhancing real-time system monitoring and uptime
- Moved the entire Github Organization to Terraform to manage access to repos using IAC principles

## EDUCATION

**Masters of Science in Data Science**, *University of Virginia* 2022  
**Bachelors of Science in Systems Engineering**, *University of Virginia* 2021

## SKILLS

<b>Tools and Languages</b>	Statistics, Probability, Bayesian Statistics, Python, Rust, Linux, Git, Numpy, Pandas, AWS (Sagemaker, EC2, S3, ECS, Lambda), Scikit-learn, Pytorch, Jax, Docker, Terraform, HPC, Slurm
<b>Supervised Learning</b>	Regression, Decision Trees, Support Vector Machines, Boosting
<b>Unsupervised Learning</b>	Clustering, Principal Component Analysis
<b>Deep Learning</b>	Feed Forward Network, CNNs, RNNs, Attention-based Models, VAE's, Diffusion Models

## PUBLICATIONS

- [1] Navya Annapareddy et al. "Handwritten Text and Digit Classification on Rwandan Perioperative Flowsheets via YOLOv5". In: (2022), pp. 270–275. doi: [10.1109/SIEDS55548.2022.9799426](https://doi.org/10.1109/SIEDS55548.2022.9799426).
- [2] Bi Shi et al. "UTX condensation underlies its tumour-suppressive activity". In: *Nature* 597 (2021), pp. 726–731.

## PROJECTS

### rust-seq ([github](#))

Helping out with the development of fundamental building block crates for rust in bioinformatics (In progress)

### UVa Building Classifier ([github](#))

Classified buildings at Uva using transfer learning.

### Comparing different ML Methods for Song Classification ([github](#))

This project focuses on classifying songs into genres using only their lyrics, evaluating the effectiveness of both traditional machine learning algorithms and neural networks in accomplishing this task.