KOVIDH JAIN

DATA ANALYST

kovidh13@vt.edu | jainkovidh@gmail.com
https://www.linkedin.com/in/kovidh-jain-49226a222/
(540) 617-1956

SKILLS

SOFTWARE

- **Java**
- **MATLAB**
- **R/RStudio**
- **C/C++**
- **Python**
- **SQL**
- Kubernetes/Docker
- Latex
- Jmp
- Parallel Computing using C
- Google Colab
- Jupyter Notebook
- **Tableau**
- Linux
- Power BI
- Minitab

EXECUTIVE SUMMARY

Highly motivated and skilled professional with **over 4 years of experience** using **R/Rstudio, Python, and Java**. Seeking to use my deep understanding of **coding**, **statistical, machine-learning techniques, and problem-solving** skills to **help organizations achieve their goals and to grow while doing so**. My ultimate objective is to leverage my skills and expertise to help make significant contributions to society as a whole.

EDUCATION

VIRGINIA TECH

BS in Computational Modelling and Data Analytics
Aug 2019 - May 2023

- Good Standing
- Overall GPA: 3.65
- Dean's List (All Semesters)

Minor in Computer Science

- In-minor GPA: 3.63

Minor in Mathematics

- In-minor GPA: 3.35

EXPERIENCE

Virginia Tech | Ecological forecasting | Python, GitHub, Google Colab

May 2023

- Developed a **Deep Learning Model** more specifically a **recurrent model(RNN)** using **Pytorch** and **tensorflow** to **forecast** the next **30 days**' water quality across 7 lakes in the USA.
- Implemented **data preprocessing** techniques and conducted **feature engineering** to prepare the input data for the model.
- **Fine-tuned** the RNN, leveraging techniques such as **Long Short-Term Memory (LSTM)** and attention mechanisms to capture **temporal dependencies** and **patterns** in water quality data.
- Successfully achieved **highly accurate predictions** for the **first 10** days of the 30-day forecasts, providing **valuable short-term insights.**

Virginia Tech| Project: Image Classification using CIFAR-10 Dataset | Python

May 2023

- Developed a **custom CNN** architecture with **18 layers**, including **Convolutional, ReLU, MaxPooling, and Batch Normalization layers**, to tackle the image classification task using the CIFAR-10 dataset.
- Strived for **improved accuracy compared** to a **ResNet model** demonstrated in the course while **simplifying the code and architecture.**
- **Leveraged PyTorch, torchvision, matplotlib, pandas, tqdm, and NumPy** libraries for efficient model implementation, and visualization.
- **Achieved** a **remarkable 82% accuracy**, **surpassing the ResNet model's accuracy of 61%** by a significant margin.
- The project's success underlined the **importance of parameter tuning and network design** in boosting accuracy for image classification tasks.

Virginia Tech |Project: DNA Tree | Java

Dec 2022

- Designed and developed a **DNA tree data structure** for efficient searching of matching DNA sequences in a large database.
- Implemented **class inheritance** to create abstract node classes for internal nodes, leaf nodes, and a flyweight node.
- Utilized a **5-way branching tree structure** with branches corresponding to the DNA alphabet **(A, C, G, T, and $)**.
- Implemented **recursive operations** for inserting and removing sequences from the DNA tree.
- Developed methods for **printing** the **tree structure, sequence lengths, and sequence statistics**.

Virginia Tech |Project: Forest Fire and Fashion-MNIST Analysis| R, RStudio

Dec 2021

- Conducted **exploratory data analysis** (EDA) on forest fires data, **analyzing 517 instances and 13 attributes, gaining valuable insights into the factors influencing fire occurrences**.
- Developed and fine-tuned **models of Fashion-MNIST** using various machine learning algorithms, **including linear regression, PCA, t-sne, QDA, LASSO, Ridge, fully connected neural networks, and Convolutional Neural Networks (CNN)**.
- **Achieved high accuracy rates,** with models performing **up to 99.6% accuracy on different datasets**, notably obtaining **exceptional results in image classification using CNN.**