RIVA JAIN

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EDUCATION

VIRGINIA TECH, College of Engineering — Blacksburg, VA
First-Year Student, BS, Computer Science and Economics (Intended) — *Currently*
Expected Graduation: May 2028

THOMAS JEFFERSON HIGH SCHOOL FOR SCIENCE AND TECHNOLOGY (TJHSST) — Alexandria, VA
Graduation Year: 2024 — Aug 2020-June 2024
Weighted GPA: 4.39
Relevant Computer Science Coursework: Data Structures with AP Computer Science A, Artificial Intelligence, Computer Vision
Other Relevant Coursework: AP BC Calculus, Research Statistics, DNA Science

TECHNICAL SKILLS/APTITUDES

Python, C++, Java, R, HTML/CSS/JS, Flask, Clustering Analysis, Data Visualization, Machine Learning, Database Handling

EXPERIENCE

JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY (APL) — Laurel, MD
Data Science/Computing Intern — Jun-Aug 2022, Jun-Aug 2023

- Analyzed opioid data using clustering, random-forest, regression, and other machine-learning models, focusing on spatio-temporal clustering; findings presented to state government for use in active overdose epidemic management program
- Analyzed the link between bat activity, deforestation, and Nipah and Ebola viruses using visualizations and machine learning models to predict future virus outbreaks due to bat activity; created proof of concept for use in client model
- Selected for internship-wide conference, communicated findings in poster presentation

ARCHIMEDES DESIGN TEAM — Blacksburg, VA
Infinitum Subteam Research Programmer — Sep 2024-Present

- Developing a neural network model to predict epileptic seizure occurrence using electroencephalogram readings and additional physiological data, as well as React Native frontend application geared towards users
- Conducted review of relevant epilepsy and machine learning model research done in the field
- Presented research and development progress in biweekly meetings with professor advisor as well as weekly subteam meetings, and larger groups of up to sixty plus people

MAJOR PROJECTS

HANDWRITING NEURAL NETWORK

- Built neural network from scratch, implementing calculus operations, prioritization algorithm, back-propagation and other optimization techniques
- Successfully trained model with MNIST handwriting dataset to recognize handwritten digits

WRITEMIND - AUTOMATED EMAIL DIARY SYSTEM

- Planned and created automated email diary system to compile email entries into a monthly diary
- Used poetry, weather, and mindfulness fact APIs, as well as HTML and CSS to create customized emails for each user

SKINTILLATE - SKIN CONDITION TREATMENT WEBSITE

- Designed and implemented Tensorflow machine learning model, web scraper, and webpage in order to identify and provide solutions for skin condition based on a picture the user uploaded
- Worked as part of a four-person team in 24-hour hackathon, winning a category prize

GARDONICA

- Created app that asked users for data on their location, collected weather and gardening information, and suggested plants to grow in a community garden in their area