

Naveen Kannan

RESEARCH ASSOCIATE

Cleveland, Ohio

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Data Scientist experienced with data analysis, visualization, building pipelines, automation and Data Engineering. I have a strong passion for coding, visualization and automation, and I compiled this CV with code. United States Permanent Resident.

Education

MS in Biomedical and Health Informatics

CASE WESTERN RESERVE UNIVERSITY

- GPA-3.9

Cleveland, Ohio

JANUARY 2022 – AUGUST 2023

Bachelor of Medicine and Bachelor of Surgery

MADRAS MEDICAL COLLEGE

- GPA-4.0

Chennai, India

SEPTEMBER 2016 – MARCH 2020

Experience

Research Associate

POPULATION HEALTH AND QUANTITATIVE HEALTH SCIENCES, SCHOOL OF MEDICINE, CASE WESTERN RESERVE UNIVERSITY

Cleveland, Ohio

MAY 2023 - Present

• Docker/Singularity Container Deployment and Documentation

- Developed Docker/Singularity containers for reproducible scientific pipelines, facilitating efficient workflows for colleagues.
- Authored comprehensive documentation to ensure seamless adoption and easy troubleshooting.
- Incorporated Mamba into the scientific workflow, reducing container build times by 300 percent.

Cluster Configuration and Big Data Analytics

- Set up, configured and maintained both VM and Raspberry Pi bare-metal servers from scratch.
- Implemented big data analytics tools (Hadoop, Spark) along with bioinformatics tools like Hail and Glow using Ansible scripts.

Genomic data Analysis

- Collaborated with the Alzheimer's Disease Sequence Project by annotating and scoring the biological effects of 362 million structural genetic variants associated with Alzheimer's Disease.

Graduate Research Assistant

POPULATION HEALTH AND QUANTITATIVE HEALTH SCIENCES, SCHOOL OF MEDICINE, CASE WESTERN RESERVE UNIVERSITY

Cleveland, Ohio

JANUARY 2023 - MAY 2023

- Engineered Docker containers for streamlined deployment of specialized R packages and Python modules, optimizing analyses for single-cell RNA datasets.

Graduate Research Assistant

GIS HEALTH AND HAZARDS LAB, SCHOOL OF MEDICINE, CASE WESTERN RESERVE UNIVERSITY

Cleveland, Ohio

MAY 2022 - DECEMBER 2022

• Mapping human movement patterns after a natural disaster.

- Developed Python scripts automating GPS coordinate extraction from GPX files of geospatial video feeds in Democratic Republic of Congo post-volcano eruption.
- Processed and transformed data into machine-readable format, enabling streamlined map generation.
- Applied automated scripts to parse video feeds into frames, implementing Machine Learning Algorithms for tent detection.
- Wrote up the findings as a part of a manuscript for a peer-reviewed publication.

Technical Skills

Operating Systems

UNIX, KUBUNTU DEBIAN LINUX, FEDORA RED HAT LINUX, RASPBAN DEBIAN LINUX, WINDOWS 11

Programming Languages

PYTHON, R, BASH, SQL

Software

HADOOP/SPARK/HIVE, JUPYTER, DOCKER, SINGULARITY, SLURM, ANSIBLE

Geospatial Analytics/Visualization

GEOPANDAS, SF (R), QGIS

Markup Languages

L^AT_EX, MARKDOWN, RMARKDOWN

Version Control

GIT

Python-based skills

PYSPARK FOR HADOOP/SPARK, TENSORFLOW, PYTORCH, PANDAS, SCIKIT-LEARN, NUMPY, SCIPY

Bioinformatics tools

SAMTOOLS, BCFTOOLS, HTSLIB, TABIX, PLINK