AKSHATH RAGHAV RAVIKIRAN

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EDUCATION

BS   **Purdue University, Computer Engineering**   *West Lafayette, IN || Aug 2022 - May 2026*
GPA: 4.0; Dean's List & Semester's Honors

High   **National Public School RNR, CS-PCM**   *Bangalore, India || Aug 2020 - May 2022*
School   *All-India Secondary School Exam: 96.8%; TOEFL: 114*

PROJECTS

YourCollege CLI (BoilerMake X Hackathon)   *Scikit-learn, Pandas, Numpy, Click, Rich*
- Innovative college recommendation system using an Unsupervised Weighted K-Means Model to provide college recommendations based on qualitative, in contrast to commonplace quantitative, factors.
- Developed CLI to enable preference weighting of holistic features to personalize college choices, Groups together colleges on the basis of proximity to cluster centroids.

Open Source SpeedCubing Library with Graphics Support   *Java, Maven, Illustrator, IntelliJ*
- Published SpeedCubing Java Library on Maven. Created efficient structures for split-second solves, optimized algorithm manipulation & designed graphic support.
- Enables cube visualization on the terminal and automatically identifies issues with data (for example, impossible cube states, algorithm errors).

Discord Bot for Cubing on a keyboard   *Java, PostgreSQL, APIs, Gradle, Blender, IntelliJ, Git, AWS Hosting*
- Built on Java Discord API (JDA); runs on simple one-line commands with an inbuilt guide system.
- Designed isometric art and 3D animations— using Illustrator and Blender —to create engaging visuals.
- Cloud-hosted on Amazon EC2 and integrated with PostgreSQL, it records and saves the user's cube, moves, and solving-times.

EXPERIENCE

Data Science Lead, Lightning Wildfire Lab (Prof. Y. Wang, Purdue EAPS)   *Lafayette, IN || Nov 2022 - Present*
- Automated API requests for large scale fire data collection from Copernicus and USGS; Goal is to apply CNN, LSTM and ConvLSTM models to comparatively find the correlation between lightning strikes and wildfires.
- Developed scripts using Xarray and Geopandas to package LandSAT data from NASA/NOAA satellites; Used Rasterio to visualize and plot GeoTIFF datasets for analyzing lightning causation.

Software Intern, MDRS Data Mining Project, Purdue SEARCH   *Lafayette, IN || Dec 2022 – Present*
- Developing software to create a searchable database of past missions run by NASA, in partnership with the Mars Society, which will enable new crew members to easily reference findings from past missions.
- Responsible for creating a PostgreSQL database structure for enabling fast recursive tree searches and integrating with a usable front-end.

Undergraduate Data Science Researcher, The Data Mine   *West Lafayette, IN || Aug 2022 – Jan 2023*
- Collaborated with Webee Technologies to help develop models that enable their IIoT technology toolset to accurately geolocate assets in indoor environments
- Worked on implementing Kalman Filtering for multi-data sensor fusion to identify proximity of assets to beacons.

SKILLS

Languages: C, Java, JavaScript, Python, PostgreSQL, Matlab
Frameworks: Xarray, Geopandas, Pytorch, Hydra, NumPy, Pandas, Rasterio, APIs, Django
Tools: Figma, Illustrator, Blender, Lightroom, PostgreSQL, AWS Hosting, Docker, Maven, Gradle