# Anderson Banihirwe

https://andersy005.github.io/

Email : axbanihirwe@gmail.com
Github : andersy005
Kaggle: andersy005


## Education

- **University of Arkansas at Little Rock** — Little Rock, AR
  *Bachelor of Science in (Computer) Systems Engineering; GPA: 3.83/4.00* — *Aug 2014 – May 2018*

## Professional Experience

- **Quansight**
  *Intern* — *June 2018 – Present*
  - **Deep Learning**: Unifying deep learning frameworks with TVM compiler stack for the open source Python ecosystem.
- **First Orion** — Little Rock, AR
  *Data Scientist Intern* — *Dec 2017 – May 2018*
  - **Data Processing**: Identified patterns and characteristics within First Orion's data warehouses using Dask, Apache Spark, Pandas.
- **National Center for Atmospheric Research** — Boulder, CO
  *Research Intern* — *May 2017 – Aug 2017*
  - **Installation**: Installed Apache Spark v2.2 on both Cheyenne and Yellowstone Supercomputers.
  - **Schedulers**: Cleaned/fixed Spark launch bash scripts that work with the LSF/PBS schedulers.
  - **spark-xarray**: Wrote spark-xarray, a python package that integrates PySpark and xarray for Climate Data Analysis.
  - **Jupyter notebooks contribution**: Contributed Jupyter notebooks and scripts using Apache Spark to NCAR's Coupled Model Intercomparison Project (CMIP) Analysis Platform.
  - **Documentation**: Documented research work at https://ncar.github.io/PySpark4Climate/

## Selected Projects

- **Spark-xarray**: Open source python library built on top of PySpark - Spark Python API and xarray for climate data analysis. https://github.com/andersy005/spark-xarray
- **Dask**: Contributed examples to dask-examples repository https://github.com/dask/dask-examples
- **Technical-blog**: wrote posts detailing approaches to my technical work in general. https://andersy005.github.io/
- **Advanced Lane Lines Detection**: A pipeline that uses OpenCV to detect lane lines on the road on a series of individual frames and/or a video stream. https://youtu.be/3NnTZ9NR03k

## Technical Skills

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|---|---|
| Languages | Python, C++, C, Scala, Bash |
| Frameworks/Libraries | Apache Spark, Numpy, Dask, Xarray Pandas, Scikit-learn, Jupyterlab |
| Toolchain | UNIX, Git, LaTeX |
| Cluster Environment | Kubernetes |
| Infrastructure as service | AWS, EC2, S3, GCP |
| Build Tools | Travis CI |

## selected presentations

- **Beyond Matplotlib - Tutorial: Building Interactive Climate Data Visualizations with Bokeh and Friends**: UCAR Software Engineering Assembly. Boulder, CO. April 2018
- **PySpark for "Big" Atmospheric Data Analysis**: American Meteorological Society (AMS) 2018 Conference. Austin, TX. Jan 2018 Recorded Presentation
- **PySpark for "Big" Atmospheric and Oceanic Data Analysis**: National Center for Atmospheric Research. Boulder, CO. Aug 2017 Recorded Presentation