

## Ashish Agarwal

Graduate Research Assistant @ SAIL LAB in UNH

(203) 781-6025 : [agar8@unh.newhaven.edu](mailto:agar8@unh.newhaven.edu)

<https://ashish-portfolio.azurewebsites.net/>

Data Engineer in UNH

<https://linkedin.com/in/agarwalashishsinghal/>

<https://github.com/CRLannister>

### SUMMARY

Passionate data science graduate student looking to advance understanding and expertise. Technically proficient in Statistical Analysis, Hypothesis testing, Descriptive statistics, Text processing, Sentiment analysis, A/B Testing, Anomaly detection, Time Series Analysis, Hyperparameter tuning, Regression analysis, Supervised learning, Unsupervised learning, Reinforcement learning, Python, R, Pandas, Polars, Dask, Numpy, Tensorflow, Scikit-Learn, SQL, NoSQL, Excel, AWS Lambda, Redshift, Kafka, Azure, git, Docker, S3, EC2, Airflow, Django, Colab, Bash, Linux, Matplotlib, Seaborn, Plotly, Altair, Power BI, Tableau and MicroStrategy.

### EDUCATION

University of New Haven		West Haven, CT
<b>Master of Science, Data Science</b>	GPA: 4.0	Aug. 2023 - December 2024
Institute of Engineering, Pulchowk Campus		Pulchowk, Lalitpur, TU
<b>Bachelor's in computer engineering</b>	GPA: 3.2	Nov. 2016 – September 2021

### RELATED EXPERIENCE

Secure and Assured Intelligent Learning Lab		West Haven
<b>Graduate Research Assistant</b>		March 2024 – Present
<ul style="list-style-type: none"><li>Acquisition and analysis of electroencephalographic (EEG) signals in brain-computer interface (BCI) systems.</li><li>Conducted statistical analysis employing advanced techniques such as time-frequency analysis via wavelet transforms, blind source separation using independent component analysis and canonical correlation analysis, signal denoising with empirical mode decomposition, and machine learning algorithms like SVM and deep neural networks for pattern recognition and classification.</li><li>Setting up and configuring essential resources, including GPU acceleration, Docker containerization, databases for data management, Datalore and WordPress websites for web development and deployment.</li></ul>		
University of New Haven		West Haven
<b>Data Engineer</b>		Oct 2023 – Present
<ul style="list-style-type: none"><li>Engineered ETL/ELT pipelines on AWS utilizing Lambda, EC2, S3, Redshift, CloudWatch, integrating with PowerBI.</li><li>Implemented OCR for image data feature extraction, fine-tuned deep learning models leveraging Hugging Face libraries.</li></ul>		
LIS Yomari		Lalitpur, Nepal
<b>Associate Software Engineer</b>		April 2021 – May 2022
<ul style="list-style-type: none"><li>Migrated on-premises data warehouses to AWS, implementing secure data transfer, infrastructure automation with scalable ETL/ELT pipelines using Apache Spark, Kafka, and AWS services like Batch, Lambda, Kinesis, Airflow, S3, Athena and Redshift.</li><li>Implemented advanced data modeling techniques as star/snowflake schemas, changing dimensions, and data partitioning.</li><li>Optimized performance through caching, partitioning, indexing and developed robust MicroStrategy reports and dashboards.</li></ul>		
Tootle		Lalitpur, Nepal
<b>Data Science Intern</b>		Jan 2021 – March 2021
<ul style="list-style-type: none"><li>Conducted research on ride-sharing platforms in Nepal, developing LRFM algorithms and customer segmentation models to analyze user behavior and identify target segments.</li><li>Developed real-time dashboards for data visualization, leveraging MongoDB for NoSQL data storage, Django for web development, and Python for data processing and analysis.</li></ul>		

### RELEVANT PROJECTS

<b>Retail Sales Inventory and Traffic ETL and Reporting</b>		Lalitpur, Nepal
LIS Yomari [Client- Ralph Lauren]		July. 2021 – March 2022
<ul style="list-style-type: none"><li>Architected a robust ETL/ELT pipeline on AWS, ingesting data from TrueVUE APIs, S3 buckets, GCP, and FTP servers, leveraging EC2, EMR, Kinesis, Glue, Lambda, S3, Airflow, Redshift, CloudWatch, CloudFormation, and IAM.</li><li>Ingested streaming data, processed and transformed it, orchestrated workflows, stored data in S3 and Redshift, implemented monitoring, logging, and automated infrastructure provisioning.</li><li>Developed metadata objects, metrics, and attributes based on specifications in MicroStrategy, conducted data validation and performance testing, designed dashboards and dossiers tailored to client requirements.</li></ul>		

### EXTRACURRICULAR ACTIVITIES

Helping Hands Nepal, HENN		Kathmandu, Nepal
<b>Volunteer and Technical Supervisor</b>		May 2017 – July 2019
<ul style="list-style-type: none"><li>Implemented Linux-based low-resource distros in remote schools of Nepal through HENN initiative.</li><li>Created tailored educational materials in Nepali language and distributed them through locally hosted web pages.</li></ul>		