

# Lawrence Liu

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## EDUCATION

**New York University, College of Arts & Science**

**New York, NY**

*Bachelor of Arts (BA) in Economics*

*Graduated: May 2021*

- Coursework: Data Science, Machine Learning for NLP, Statistics, Econometrics, Web Design

## TECHNICAL SKILLS

- Tools & Frameworks: AWS, GCP, Snowflake, dbt, Dash, SQL Server, PowerBI, Report Builder (SSRS), SSIS
- Languages: Python, SQL, JavaScript, HTML/CSS
- Certifications: GCP Data Engineer, AWS Machine Learning Specialty, Snowflake SnowPro, dbt Analytics Engineering

## EXPERIENCE

**phData – Data Engineering Services** (2022 Snowflake Partner of the Year)

**Remote**

*Data Engineer | Python, SQL, AWS, Snowflake*

*May 2022 – Present*

- Refactored legacy data and machine learning pipelines with Airflow, Glue, and Redshift to output dollar sales, transaction count, and ingredient usage forecasts to over 2400 restaurants weekly for suggested ordering operations, decreasing end-to-end pipeline runtimes by 16+ hours
- Designed Redshift object schemas and implemented Flyway into GitHub actions to version control database migrations
- Continued upskilling on data products and collaborating with the Snowflake team to publish learning resources to the Snowflake community

**Epic Systems – Healthcare Software**

**Madison, WI**

*Analytics Engineer/BI Developer | Python, SQL, JavaScript, HTML/CSS, Report Builder, PowerBI*

*June 2021 – May 2022*

- Developed an automated notification framework for the 3500+ Solutions Engineering division allowing for easy project tracking and compliance monitoring for managers
- Directly reported to the SVP, tasked with conducting deep dives into existing processes to deliver data solutions for areas needing improvement, such as automating the annual hiring target calculation for HR and Staffing Leads
- Built out the ETL of the reporting SQL Server database using SSIS packages
- Created pixel-perfect reports and dashboards for customers and internal stakeholders using Report Builder and PowerBI

## PROJECTS

**NFL Honey Combs** | *JavaScript, D3.js, HTML/CSS*

[lwrncliu.github.io/nfl\\_honeycombs](https://lwrncliu.github.io/nfl_honeycombs)

- Designed and developed a web-based visualization of NFL team performances for the 2021-2022 season portrayed by honey combs and bees using D3.js

**3D Basketball Shot Charts** | *Python, Plotly, Dash, HTML/CSS, PySpark*

- Designed and developed an interactive 3D visualization of NBA shot charts using Plotly and Dash
- Processed 21 years of NBA data using PySpark, designed table schemas on BigQuery, and re-learned principles of quadratic functions to calculate ball flight path coordinates in 3D space

**Data Augmentation in Document Understanding Tasks** | *Python, HuggingFace*

- Implemented data augmentation onto the optical character recognition (OCR) output of restaurant receipts to create a larger sample size when fine-tuning the LayoutLM machine learning model to build model resiliency and improve label prediction
- Found that data augmentation of layout-rich documents improved a model's F1 score for small training sizes

## PERSONAL INTERESTS

- I enjoy playing tennis, running, and taking photos (Fujifilm X-T1)