

Shreya Patil

+1-443-453-8281 | shreya.patil.u@gmail.com | Baltimore, MD

LinkedIn - <https://www.linkedin.com/in/shreyapatilu-datascientist/> Website - <https://shrpatil.github.io/>

Work Authorization: H4 EAD (No sponsorship needed)

PROFESSIONAL SUMMARY

- Data Scientist with 4+ years of experience in **Machine Learning, Deep Learning and High-Performance Computing (GPU)** with enhanced skills of building prototypes and designing algorithms.
- Ability to deeply understand business challenges and deliver impactful results at the intersection of research and practice.

SKILLS

- **Programming:** PySpark, SQL, Linux, Python (Pandas, NumPy, NLTK, pytesseract, spaCy, Scikit-learn, PyTorch, Tensorflow, AutoKeras, DGL, NetworkX, Matplotlib, Seaborn)
- **Tools:** Jupyter, Databricks, GitHub, Posit workbench, Tableau.
- **Data Handling:** Data Mining, Data Pipelines, Exploratory Data Analysis.
- **Databases and Cloud Platforms:** MySQL, Azure ML Studio

PROFESSIONAL EXPERIENCE

Research Fellow, U.S. Food and Drug Administration (FDA)

Jul 2023- Present

- Developed a Graph Neural Network (GNN) architecture for node classification task in Pharmacovigilance dataset, achieving a 0.96 accuracy on a Graph Convolutional Network (GCN) model.
- Conducted a comprehensive literature review on data mining in pharmacovigilance data and semantic Vs topological impact on network analysis.
- Extracted and analyzed 6.6 million public health adverse reaction reports using SQL, demonstrating strong data handling and feature engineering.

Research Assistant, UMBC, MD (PI: Dr. Milton Halem)

Aug 2022- May 2023

- Created a forecasting algorithm for a Wildfire Digital Twin (WDT) to forecast the spread and the smoke impacts on air quality.
- Evaluated Global Tree Cover Loss to predict the impact of mega wildfires and deforestation on the irreversible climate change in tropical forests.
- Acquired 25 TB fire data (Grib files) from the HRRR instrument on the NOAA satellite to train the ResNet model.

Data Scientist, Redapt Inc

May 2022- Aug 2022

- Build predictive model for Make-a-Wish organization using Decision Tree on Azure ML Studio for effective resource management.
- Collaborated closely with clients to ascertain data architecture and analysis needs to design custom analytics reports.
- Analyzed data from Azure Blob Storage to create reports using PowerBI tool.

Research Assistant, UMBC, MD (PI: Dr. Milton Halem)

Aug 2021- Apr 2022

- Designed a Deep Neural Network architecture using python for time series microphysics parameters, to reduce the computational time by replacing components in NASA Unified-Weather Research Forecasting model (NU-WRF).
- Trained and tested Auto-Keras Neural Net Architecture Search (NAS) algorithm on WRF-CHEM models microphysics output over US nested domains at a high-resolution data with RMSE of 0.015.
- Analyzed 3 TB data stored in Hadoop distributed file system to retrieve essential parameters of microphysics to predict the precipitation with 40% speedup.

Senior Analyst, Capgemini Technology Service LTD, INDIA

Mar 2018- Nov 2019

- Maintained and administered databases and virtual environments in VMware and Microsoft Azure platform for 10 clients.
- Delivered in-depth training, imparting knowledge of best practices to the 15+ new recruits as Team Lead.

EDUCATION.

Master of Professional Science - Data Science University of Maryland, Baltimore County (UMBC), Baltimore, MD

May 2023

Master of Technology - Computer Science and Engineering Shivaji University, MH, INDIA

May 2019

Bachelor of Engineering – Computer Science and Engineering Shivaji University, MH, INDIA

May 2017

PUBLICATION AND ARTICLES

- Accelerating the WRF-CHEM Model Using a Machine Learning Emulation [Poster](#), 2022 American Meteorological Society Conference.
- Patil S U (2019), Optimal Number of Cluster Identification using Robust K-means Algorithm. International Research Journal of Engineering and Technology.
- Patil S U (2018), A Review of Clustering and Clustering Quality Measurement. International Research Computer Engineering in Research Trends.
- Technical Content Creation [Medium](#)