Shreya Patil

Email: shreyap2@umbc.edu LinkedIn GitHub
Phone: +1-443-453-8281
305 W Fayette St, Apt 1812, Baltimore, MD 21201

EDUCATION

Master of Professional Science - Data Science *May 2023*
University of Maryland, Baltimore County (UMBC), Baltimore, MD

- Cumulative GPA: 4.0/4.0
- Relevant Coursework: Data Analysis and Machine Learning, Platforms for Big Data Analysis, Statistics and Visualization.

Master of Technology - Computer Science and Engineering *May 2019*
Shivaji University, Kolhapur, MH, INDIA

- Cumulative GPA: 3.7/4.0
- Relevant Coursework: Data Mining, Parallel Algorithm Design, High Performance Computer Architecture.

Bachelor of Engineering – Computer Science and Engineering *May 2017*
Shivaji University, Kolhapur, MH, INDIA

- Cumulative GPA: 3.7/4.0
- Relevant Coursework: Design and Analysis of Algorithms, Project Management.

PROFESSIONAL EXPERIENCE

Research Assistant *UMBC, MD (PI: Dr. Milton Halem)* *Aug 2021- Present*

- Developing 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-Kera's Neural Net Architecture Search (NAS) algorithm on WRF-CHEM models microphysics output over US nested domains at a coarse and high-resolution data with RMSE of 0.015.
- Wrangled 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 computer networks and virtual environments in VMware and Microsoft Azure platform for 10 clients.
- Delivered in-depth training, imparting knowledge of best practices to the 10+ new recruits as Account Lead.
- Organized system infrastructure documentation and operating procedures, strengthening overall team performance.
- **"Project Star Award"** Jul-Dec 2018, Cloud Infrastructure Services Capgemini, Bangalore, India.

SKILLS

Python | SQL | Linux | PySpark | HPC | Hadoop | Time series prediction | Statistics | Cloud Infrastructure | Docker | Tableau | Jupyter | GitHub

PROJECTS

WhatsApp Chat Analysis *Jan 2022*

- Analysing the WhatsApp groups chat dataset using Natural Language Processing (NLP). To get the insight of how the age difference of people in a group affects the characteristics of the chat and the activities in the group.
- Tools: Python (Libraries: NLTK, Pandas, Matplotlib, Seaborn)

Analysis of Brewery Industry in the US *Oct 2021*

- Explored brewery dataset by applying Exploratory Data Analysis (EDA) to get insights of the brewery industry in the United States. It will help individuals who want to start a brewery business, to identify profitable areas.
- Tool - Python (Libraries: Pandas, Plotly, NumPy)

Optimal Number of Cluster Identification using Robust K-means Algorithm. *May 2019*

- Developed a Robust K-means Algorithm to identify optimal numbers of clusters in protein sequences by removing noise clusters. Measured goodness of clusters using Silhouette Coefficient.
- Tool - Python (Libraries: Pandas, Scikit-learn, Regular Expression)
- **Publication:**
  - Patil S U Nuli U A (2018), A Review of Clustering and Clustering Quality Measurement. International Research Computer Engineering in Research Trends.
  - Nuli U A, Patil S U (2019), Optimal Number of Cluster Identification using Robust K-means Algorithm. International Research Journal of Engineering and Technology.

Automatic Fabric Defect Detection using GPU. *Apr 2017*

- Created a prototype to detect the fabric defect using canny edge detection algorithm. When fabric comes out from a production machine an image was captured and processed using GPU with High Performance Computation (HPC) in a real time environment.
- Implemented this prototype in 3 small scale textile industries. This model helped to take corrective action to minimize up to 50% of the value loss of the product.
- Tool - C++, Compute Unified Device Architecture (CUDA) programming.
- Recognized by the award for '**Best Project of The Year 2017'** by the college.

LEADERSHIP

IEEE Student Chapter CS Department Lead: *Apr 2018- May 2019*

- Collaborated with 4 members of other departments to organize 5 technical workshops, expert talks and paper presentation events that gathered 500+ participants.

Student Association Treasurer: *July 2015- May 2017*

- Established and managed financial activities with faculties of Computer Science Student Association for 2 years.
- Pitched to local tech companies to raise 100K INR sponsorship for the yearly Tech-Symposium event with 1000+ student participants.

CERTIFICATION

- Python Specialization (Retrieving, Processing and Visualizing Data), Coursera *Jun 2020*
- Fundamentals of Visualization with Tableau, Coursera *Jul 2020*
- C2090-930 IBM SPSS Modeler Version 18(V3). *Dec 2019*