Ashwin Sateesh Kumar

sateeshkumar.a@northeastern.edu • linkedin.com/in/ashwins24/ • github.com/ashwin-sateesh • Boston, MA • (925)-445-6494

EDUCATION

Northeastern University — **Boston, MA**
Master of Science in Data Science, CGPA: 3.92/4 — **September 2021 - September 2023**
Courses: *Supervised Machine Learning, Data Mining, Algorithms*

PES Institute of Technology (affiliated to Visvesvaraya Technological University) — **Bengaluru, India**
Bachelor of Engineering in Electronics and Communications, — **August 2015 - July 2019**
Courses: *Linear Algebra, Artificial Neural Networks, Pattern Recognition*

SKILLS

Programming Languages: Python| R | C | C++ | MATLAB | SQL
Cloud Services: Amazon Web Services
Frameworks and Libraries: Scikit-Learn | TensorFlow | Keras | PyTorch | OpenCV | Pandas | NumPy| Matplotlib | NLTK | dplyr
Tools/IDE: Jupyter Lab | PyCharm | RStudio | Github | Tableau | IBM SPSS | MS Excel | SQLite| MySQL | NoSQL
Project Skills: Agile (Scrum, Jira, Confluence)

WORK EXPERIENCE

Signify (Phillips Lighting) — **Boston, MA**
Machine Learning Research and Development Intern — **June 2022 - Present**

- Designed an AR based interactive system and developed an application using Unity 3D which performs REST API calls on Color Kinects server to trigger the shows on the Phillips lighting device at a particular site
- Found a repetitive light usage pattern and customized the light scenes for a household by predicting the scenes with Xgboost model and hyperparameter tuned using randomized search with 5-fold cross validation
- Forecasted the time series scenes for a household using Phillips Hue Light data by building VARMAX and SARIMAX models
- Discovered unusual patterns in survivability of plants and assisted grower to evaluate optimal strategies for each cultivar
- Built and demonstrated a User Re-Identification proof of concept for lighting personalization from a smart home context

KPIT Technologies Ltd — **Bengaluru, India**
Trainee Software Engineer — **July 2019 - November 2020**

- Analyzed the working of Environmental Perception module of Autonomous Driving System architecture which includes objection detection and semantic segmentation
- Devised an object detection prototype of Vision and Radar Sensor Fusion for Advanced Driver Assistance System and deployed it in Simulink
- Conducted research to improve annotation of 1 million image inputs for a deep learning model of BMW Autonomous vehicle

CERTIFICATIONS

Artificial Intelligence Engineer, Simplilearn Solutions — **August 2020 - June 2021**

- Gained hands-on experience with Statistical Analysis, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing and Cloud Computing using Amazon Web Services

PROJECTS

Time Series Analysis of Favorita Stores — **November 2021 - December 2021**

- Analyzed the seasonality and trends by decomposing the 3 million sales data and removed the stationarity
- Optimized the wastage and operating costs by forecasting sales and demand using SARIMAX and machine learning models

Amazon E-commerce Capstone Project — **July 2021 - September 2021**

- Performed Sentiment analysis of 4000 Amazon customer reviews using Word2Vec and LSTM's. Found main positive, negative and neutral reviews using wordcloud, and reviewed text to build a recommender system

Pet Classification and Facial Recognition Model — **April 2021 - May 2021**

- Constructed a convolutional neural network for the classification of cats and dogs, with VGGNet-3 based architecture and built a face detection model by applying bounding box augmentation to detect cats and dogs in real time

Detection of Copy Move Forgery — **October 2018 - May 2019**

- Developed a method that automatically detects duplicate regions in an image. Identified the key points and descriptors of MICC-F220 images using Scale-Invariant Feature Transform (SIFT)
- Classified the images as tampered and original with a dense neural network with an accuracy of 94 percent

LEADERSHIP

- Graduate Teaching Assistant (CS6140 Machine Learning) – Collaborated with professor in creating new assignments, held office hours to support 30 graduate students in solving technical problems, and graded quizzes and assignments
- Volunteer – Facilitated the Electronics and Communications department in organizing the 24 hour 'Kludge' Electronic Design challenge for over 50 teams and leading industry owners