

Contact

www.linkedin.com/in/sushmaasureshkalkunte (LinkedIn)

Top Skills

Hadoop
Amazon Web Services (AWS)
Hive

Honors-Awards

SPOT Award

Publications

Autonomous Method for Object Based GUI Testing using Image Processing
Satellite Image Classification using Clustering Algorithms with Edge Detection Operators

Sushma Suresh

Machine Learning Engineer | Data Scientist | Computer Vision |
Masters in Data Science from Northeastern University
Seattle, Washington, United States

Summary

I have a passion for crunching numbers and exploring data. It's amazing to see how raw data can be transformed into meaningful insights, which in turn can be translated into compelling stories that drive positive change. The idea of being able to harness the power of data to make a real-world impact is truly fascinating to me. I'm driven to success by my curious mind and the ability to look for solutions without giving up on a problem.

I am a Data Scientist/Machine Learning Engineer with 4 years of experience working across multiple industry domains like e-commerce, music, ag-tech, retail, and management consulting. Specifically, my background includes Computer Vision, Natural Language Processing, Search, and Recommendation and I am willing to explore and grow into new domains. I'm drawn to roles where I can collect data, clean, model, draw, and visualize insights until I can put it into production and watch it work on a large scale. I graduated with my Masters in Data Science from Northeastern University in December 2021.

Currently, I am actively looking for full-time opportunities in Data Science, Machine Learning, and Data Engineering. I would love to connect with anyone having the same interests.

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- Machine Learning - Linear/Logistic Regression, Clustering, SVM, KNN, Regularizations, Deep Learning(CNN, LSTM), GAN
- Computer Vision - Image Classification, Object Detection, Semantic, and Instance Segmentation, Generative Networks
- NLP - Named Entity Recognition, Sentiment Analysis, RNN, LSTM, Machine Translation, Speech Recognition
- Languages – Python, R, Bash, C++

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- Data Warehousing - Amazon Web Services (AWS): S3, Athena, Lambda, Glue, EMR, Airflow
- Data Modeling - Kimball's fact and dimensional modeling, Star Schema, ERDs
- Data Pipeline - Apache AirFlow, PySpark, VisualCode, Jupyter Notebook

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- Data Visualization - Tableau, Seaborn, Matplotlib
- SQL - Athena, BigQuery, Microsoft SQL Server, MongoDB,
- Excel - VBA, Macros, Pivot Tables/Charts, IFS, SUMIFS
- Project Management Tools - JIRA
- Project Management Styles - Agile, Scrum, Kanban, Waterfall

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- Git
- Microsoft Office - Excel, PowerPoint, Word, Outlook, Sharepoint, Teams
- Effective communicator and team player

Experience

Groupon

Machine learning

February 2022 - Present (1 year 3 months)

Seattle, Washington, United States

Played a crucial role in successfully migrating Search services from Hadoop to AWS cloud, resulting in increased scalability and cost-effectiveness.

Designed and implemented a data quality automation solution utilizing Hive, Hadoop, and AWS technologies to ensure the correctness and accuracy of Click Model and Autocomplete services post-migration

Khoury College of Computer Sciences

Graduate Teaching Assistant

January 2021 - May 2022 (1 year 5 months)

Boston, Massachusetts, United States

Teaching Assistant for the DS5220- Supervised Machine Learning course. Primary responsibilities include mentoring students, grading assignments, holding office hours, and assisting the professor with misc academic tasks.

Previously Teaching Assistant for:

- 1) DS2000 - Programming for Data Science
- 2) DS3000 - Fundamentals of Data Science

NimbleWork, Inc. (formerly Digité)

Machine Learning Intern

June 2021 - September 2021 (4 months)

Developed a Computer Vision-based Machine Learning solution for the Agriculture Technology(AgTech) industry. Used Deep Learning to build a canopy cover estimation technique that helps farmers accurately track and monitor crop growth, thereby leading to higher crop productivity.

Spotify

Machine Learning Engineer Co-Op

July 2020 - January 2021 (7 months)

Boston, Massachusetts, United States

Contributed extensively to Spotify's recommendation & search experience for Podcast, by integrating real-world entities and their relevance to podcast episodes.

Mu Sigma Inc.

Decision Scientist

October 2016 - August 2019 (2 years 11 months)

Bangalore, India

Worked extensively with Research, Development, Client Services teams, to bring about digital transformation to traditional business processes. Interacted with business stakeholders (at all levels) of multiple fortune 500 companies.

Projects-

- 1) Text Detection and Classification using Computer Vision and Machine Learning

Description - Implemented image processing techniques using Computer Vision on faxed/scanned documents for accurate text detection and segmentation. Then applied machine learning models to classify the text to various categories and sub-categories. This automation technique bought

down the overall processing time by 90% and reduced the occurrence of manual errors.

2) Human Detection and Tracking using Computer Vision

Description - Leveraged video analytics capability by using Convolution Neural Networks to detect and track humans across multiple frames, thereby enabling the client(largest US-based retail) to effectively manage their billing queues and reduce wait time by 75%

3) Facial Expression and Gender Detection

Description- Developed intricate algorithms for capturing and identifying facial expressions using Deep Networks for the Innovation and Development team of the company. Classification of people was then done based on gender with the help of Convolutional Neural Networks(CNN). The model achieved an accuracy of 86% and was showcased to the business stakeholders for technology demonstration.

4) Designed Centralised Report Operations Portal

Description - Worked with the Stakeholders' risk analytics team to design a module that uses data scraping to collect news feeds from multiple API sources and store it in MongoDB after processing in real-time. This helped in automating time-consuming manual tasks, thereby increasing the usability of the tool by 60% within the organization.

Other Projects-

1) Baggage Carousel System

2) Generating personalized offers in a retail store scenario

Indian Institute of Science

9 months

Research Assistant

May 2016 - October 2016 (6 months)

Bangalore

Project: Real-Time image projection for In-Flight Entertainment

Description: Researched on real-time surface detection and projection mapping techniques in order to live stream videos as well as static images for in-flight entertainment.

Research Intern

February 2016 - April 2016 (3 months)

Department of Electronic Systems Engineering

Project: Real-Time shape detection and object localization using image processing

Description: Developed an algorithm to identify objects and shapes accurately within images and localizing them. The technique can be used accurately find the coordinates of the objects in real space for various applications like robotic arm movement and Graphical User Interface testing

Published my findings as a research paper titled- "Autonomous Method for Object-Based GUI Testing using Image Processing" at the International Journal of Computer Science and Technology

Studsat 2

Project Intern

June 2014 - August 2015 (1 year 3 months)

Center For Student Satellite Development, NMIT, Bangalore

Project- Image Segmentation and Clustering for Satellite Images

Description- Analysed and implemented various image clustering algorithms (K-Means and Fuzzy C-Means). A comparison of both these algorithms for multiple clusters was performed on sample satellite images using MATLAB. On completion, pre-processing, Edge Detection algorithms were applied to enhance the performance and obtain distinct edges for better segmentation.

- Published my findings as a research paper titled- "Satellite Image Classification using Clustering Algorithms with Edge Detection Operator" at the International Journal of Recent and Innovation Trends in Computing and Communication

Education

Northeastern University

Master of Science - MS, Data Science · (September 2019 - December 2021)

Nitte Meenakshi Institute of technology

Bachelor of Engineering (B.E.), Computer Science · (May 2012 - May 2016)