

KAUSHIK KARALGIKAR

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EDUCATION

University of Southern California - Master of Science in Computer Science. GPA : 3.85/4 December 2021
Relevant Coursework: Analysis of Algorithms, Foundations of Artificial Intelligence, Foundations of Data Mining, Machine Learning

BMS College of Engineering - Bachelor of Science in Computer Science. GPA: 3.63/4 May 2017
Relevant Coursework: Database Management, Web Programming, Computer Networks, Data Structures, Operating Systems

SKILLS

Languages	Java, Python, C++, JavaScript, TypeScript, R, Scala, HTML, CSS, Bootstrap4
Databases	Oracle SQL, SQL Server, MySQL, DynamoDB
Frameworks	Spring, Spring-Boot, AngularJS, Apache Spark, PyTorch, Tensorflow, MXNet
Other	Jenkins, Git, S3, AWS Lambda, EC2, API Gateway, JIRA, PowerBI, Azure. Node.js

EXPERIENCE

Amazon Web Services | Software Dev Engineer I Intern May 2021 - August 2021

- Improved ease of use by 70% by developing an API to add Sagemaker models to an ingestion pipeline for benchmarking to evaluate performances against varying parameters including instance type and latency.
- Implemented a single inference script that works for compiled and uncompiled models, with different instance types for ResNet architecture across Pytorch, Tensorflow and MXNet frameworks using Python reducing manual intervention to 5%.

Marshall School of Business | Graduate Research Assistant June 2020 - April 2021

- Analysed political affiliation of executive members of Fortune 500 companies in relation to involvement and funding in industries.
- Applied expectation-maximization to preprocess data, extract information and perform regression analysis using R, Python and AWS.

Deloitte Touche Tohmatsu India LLP | Consultant July 2019 - December 2019

- Led a team of 5 to handle overall data management solutions by designing and building world class information management systems.
- Reduced latency by 50% by handling DevOps transactions for data load and visualisation tool using CI/CD pipeline with Azure.
- Analyzed and executed the test cases for various phases of testing.

Deloitte Touche Tohmatsu India LLP | Business Technology Analyst July 2017 - June 2019

- Reduced manual intervention for generating observations from data by 90% by designing, developing and maintaining a data storage, transformation and visualization tool for client with Oracle SQL, Java, and AngularJS.
- Successfully managed Extraction, Transformation and Loading (ETL) process by pulling terabytes of data from heterogeneous sources and different formats to relational data warehouses using complex stored procedures.
- Built a highly scalable data ingestion, data processing and visualization tool for clients with Microsoft SQL Server and PowerBI.
- Developed test cases and plans to complete unit testing and support system testing.

PROJECTS

Website and Android application (Android, Node.js)

- Designed a website hosted on Google Cloud Platform that aggregates movies and television shows using TMDB API. Users can view details, add, or delete movies and television shows to profile.

Go Game Agent (JAVA)

- Designed a game playing agent to play the Go game against a bot with a win rate of over 50%.
- Implemented Mini-max algorithm and optimized it by Alpha-Beta pruning to reduce time complexity.

OriginX - Combat Game based on Reinforcement Learning (C#, Unity, Python)

- Developed a combat game where player fights to win against a trained AI bot and advance to the next level. Trained the agent using Proximal Policy Optimization to tune its difficulty based on the moves of the player. Increased the difficulty of the game at every level.

Recommendation System (Apache Spark, Python)

- Implemented a Content Based Recommendation System with RMSE of under 0.9 on Yelp Dataset
- Built Item Based and User Based Collaborative Filtering Recommendation System with RMSE of under 0.9 and 1.0 on Yelp Dataset.

Handwritten Digit Classification (Python)

- Developed a Multi-Layer Perceptron (MLP) neural network to classify hand-written digits with an accuracy of over 94%.

PUBLICATIONS

- Co-authored and published a paper titled 'Survey on IoT Based Home Automation System' in November 2016 in the International Journal of Advance Research in Computer Science and Management Studies.
- Co-authored and presented a paper titled 'Alleviating the flooding attack on AODV based mobile adhoc networks using next HOP Aegis technique' at the National Conference on Information and Communication Technology in February 2016.

LEADERSHIP & INVOLVEMENT

Viterbi Graduate Students Association | Vice President, Communications May 2020 - May 2021

Rotaract Club of BMSCE | Volunteer September 2013 - May 2017