

Karan Kanchan

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EDUCATION

Master of Computer Science

August 2018 - May 2020

North Carolina State University, Raleigh, North Carolina

Courses: Algorithms, Artificial Intelligence, Database, Computer Networks, Computer Graphics, Software Engineering

Bachelor of Engineering in Information Technology

August 2014 - May 2018

Dwarkadas J. Sanghvi College of Engineering, Mumbai, India

Courses: Operating Systems, Database, Distributed Computing, Object Oriented Programming, Computer Architecture

TECHNICAL SKILLS

- **Languages:** Java, Python, Ruby, JavaScript, C, C++, Scala, SQL
- **Big Data:** Hadoop, MapReduce, Spark, Kafka
- **DevOps:** Jenkins, Git, Maven, Docker, Kubernetes, Nagios, Ansible
- **Web Technologies:** HTML 5, CSS 3, Ruby on Rails
- **Databases:** MySQL, DynamoDB, PostgreSQL, Neo4j

PROFESSIONAL EXPERIENCE

Data Analyst, SONY, Los Angeles

Sept 2020 – Present

- Analyzing viewers' emotions and reactions to TV shows to understand and bring more objectivity to TV content and increase audience engagement.
- Transformed NLP analyzed TV Shows' scripts into more structured entities and created objective summaries that can feed downstream analytical applications.
- Worked with a robust tool to accurately break scripts into its underlying elements and scale up volume of script ingestion for analysis purpose.
- Validated output of the tool by manual inspection and dealt with identified issues to further improve the tool.

Software Engineer Intern, Amazon, Seattle

May 2019 - Aug 2019

- Built a module to improve product supply-demand matching and reduce customer experience issues.
- Wrote code to switch from the old method of procuring inventory into the fulfilment network to new method which reduced Customer Orders' Lead Times and improved **efficiency by 87%**.
- Collaborated with Amazon Promise team to work on reducing product-promise misses.

Research Intern, Cere Labs Pvt. Ltd., Mumbai

Dec 2016 - Jan 2017

- Built real-time object detection model to identify and localize multiple objects in video stream with **91% accuracy**.
- Used OpenCV to capture real-time video frames from a webcam and performed Selective Search on them to select multiple high-quality proposed regions.
- Transformed proposed regions into input dimensions and performed forward computation for feature extraction using R-CNN (Region based).
- Used extracted features and classes of PASCAL VOC data set to train support vector machines for classification.

ACADEMIC PROJECTS

DevOps

- Created CI/CD pipeline for a web application.
 - Built the code using Maven and scheduled pipelined jobs with Jenkins which did continuous builds.
 - Created MYSQL image and container using Docker to host the application on it.
 - Used Kubernetes to manage docker container and set the environment on AWS's EC2 instance.

Recommendation System

- Created a recommender system that recommends new musical artists to a user based on their listening history.
 - Built the system using Alternating Least Squares Method for Collaborative Filtering with Apache Spark and Python.
 - Optimized execution time by RDD caching and determined predictive accuracy of model on audioscrobbler dataset.

Machine Learning

- Worked with a team of three to create a Machine Learning model that could predict crop diseases.
 - Trained weather and rainfall data sets with Random Forest Regressor to create a crop disease prediction module which gave **94% accuracy**.
 - Used Python micro-framework Flask to build a RESTful API to connect the Machine Learning model to the project UI. Performed data wrangling using Python library Pandas.

Open Source Contribution

- Contributed to Expertiza, an open source application used at NC State University for submissions and peer reviews.
 - Resolved issues related to team invitations and advertisements made by students by adding new functionalities and fixing existing bugs using Ruby on Rails.
 - Performed unit testing and integration testing of the code using Ruby's RSpec testing tool.

Web Application

- Created a web-based application to recognize user intent when fetching legal documents.
 - Performed web scraping with the python package BeautifulSoup, unsupervised training using Convolution Neural Networks and feature learning by constructing word embeddings with Word2vec.
 - Used JavaScript to call Flask REST API which interacts with model to return predictions in JSON format.