

# Amandeep Rathee

AWS Cloud Certified • Kaggle Top 1%

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## EDUCATION

- Duke University** Durham, NC  
*Master of Science in Data Science (MIDS); GPA: 3.7/4.0* Aug 2019 – May 2021
- Visvesvaraya Technological University** Bangalore, India  
*Bachelor of Science in Computer Science; GPA: 3.8/4.0* Aug 2013 – May 2017

## TECHNICAL SKILLS

- Languages:** Python, R, Java, C++, SQL.
- Frameworks:** TensorFlow, PyTorch, Keras, Scikit-Learn, Pandas NumPy, SciPy, NLTK, Gensim, Tidyverse.
- Technologies:** Git, Hadoop, Spark, AWS, Google Cloud Platform, Docker, Kubernetes, CI/CD, Tableau.
- Certifications:** AWS Certified Cloud Practitioner (ID: 5ZMJ32BDLJFEQF9Y)

## RELEVANT EXPERIENCE

- Research AI** Seattle, WA  
*Data Scientist - Part-time* Aug 2020 - Present
  - Developed the state-of-the-art reinforcement learning model that solves the NP-hard capacitated vehicle routing problem.
  - Implemented a trust region-based optimization technique to find the shortest trip distance for a fleet of delivery trucks.
  - Incorporated a visualization tool that automatically tunes hyperparameters of a reinforcement learning model.
  - Communicated findings with senior AI researchers at Research AI via weekly presentations.
- LifeOmic** Morrisville, NC  
*Machine Learning Intern - Full-time* May 2020 - Aug 2020
  - Reduced 70% time from a document denoising pipeline by developing a vision-based linear regression model.
  - Designed experiments and collected EEG data to find if meditation impacts brain activity.
- Duke Center for Computational Biology** Durham, NC  
*Data Scientist Intern - NSF-funded Project* Nov 2019 - May 2020
  - Created an R package that finds whether given phenotypes are mutually exclusive.
  - Developed an extract, transform, load (ETL) pipeline from a Web Ontology Language (OWL) database.
- UpGrad Education** Bangalore, India  
*Data Science and AI Content Strategist - Full-time* Jul 2017 - May 2019
  - Identified factors of customer churn for India's top telecom company (with 450M customers) using machine learning.
  - Drove the net promoter score from 25% to 60% by developing data science courses taken by 10,000+ students.
  - Increased the revenue of online AI program by \$400,000, and helped it become the top AI program in 2018 across India.

## DATA SCIENCE PROJECTS

- Video-based NLP** Built a serverless application on the cloud that processes natural language from a YouTube video and provides video sentiment and a list of topics discussed in the video.  
**Skills:** Python, Flask, Serverless Engineering on AWS, YouTube API (May 2021)
- Recommendations to NASCAR Teams** Analyzed over a million rows of proprietary NASCAR lap data to make performance recommendations to NASCAR teams. This included recommendations and visualizations on pit strategy, driving style and track-specific insights.  
**Skills:** Python, Tableau (April 2020)
- Multi-label Human Classifier** Trained a convolutional neural network that identifies a person's gender, age, emotion, and apparel.  
**Skills:** Python, TensorFlow, Keras, NumPy, Multi-label Classification (December 2019)
- Playstation vs Xbox** Conducted statistical analysis to determine that PlayStation variant of a game has 30% higher sales than the Xbox variant.  
**Skills:** R, Exploratory Data Analysis, Regression Analysis (November 2019)
- Political Sentiment Analysis** Analyzed public opinion on Demonetization (a controversial 2016 currency ban in India) using Twitter data, and found that 50% of the tweets were neutral, 30% were in favor and 20% were against the ban.  
**Skills:** R, Text Scraping, Natural Language Processing, Twitter API (November 2016)