

# Karan Singla

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## PROFESSIONAL SUMMARY AND SKILLS

- **2.5+ years of full-time Software Development experience**, including 1.5 years in Machine Learning, Natural Language Processing (NLP) in a fast-paced working environment
- Strengths include Python, REST APIs Design & Development, Big Data Exploration, Statistics, Machine Learning, Natural Language Processing, Team Collaboration, SDLCs
- **Specialization in Applied Data Science with Python** from UoMichigan through Coursera
- **Languages:** Python (Django, Falcon, Jupyter), Java, C++, HTML/ CSS
- **ML/AI Libraries:** Scikit-learn, Pandas, Matplotlib, Numpy, TensorFlow, Spark, NLTK
- **Databases:** MongoDB, MySQL, MS SQL Server
- **Process and Tools:** Azure Devops, Docker containers, version control using GIT, Scrum and Agile development methodologies

## EDUCATION

**Master of Applied Computer Science** at University of Windsor (UoW) with **GPA: 90** 2019-Present  
**Bachelor's in Computer Science** at IIIT, Noida, India 2013-17

## WORK EXPERIENCE

### Senior Software Developer at UST Global

Mar 2018-Jul 2019

Intelligent Computing Environment (ICE) [Python-Django]: UST's Machine Learning, NLP platform.

- Microservices based pipeline for text mining, named entity recognition, predictive modeling
- Integration of existing NLP models Spacy, CoreNLP, Mitie, CRF for language english, spanish
- Took ownership of backend (API Design and Development)
- Database Design, Code Review, Client Management, Collaboration with UI team, CI/CD

### Software Engineer at Infosys

Jul 2017-Mar 2018

Migration of on-premise applications to Microsoft Cloud Azure

- Provided infrastructure, virtualization services on cloud MS Azure
- Deploying apps on virtual machines and testing after migration

### Software Engineer Student Intern at Infosys

Jan-May 2017

### Web Developer Summer Intern at Tnine Infotech

Jun -Jul 2016

## ACADEMIC AND PERSONAL PROJECTS

**YouTube Statistical Data Analysis [Python, Jupyter]:** Analysis done on YouTube trending videos, and COVID-19 videos.

Jan-Apr 2020

- COVID-19 related data mining using YouTube Data v3 API
- Data Cleaning, Processing and Visualization using Apache Spark, Pandas, Matplotlib, Seaborn

- <https://github.com/karansingla06/YouTube-Trending-Videos-Analysis>

**Admin Controlled Chatbot using Chat [Python-Django, Bootstrap]:** An admin controlled chatbot where admin can make any changes to the bot through chatting and interaction. Sep-Dec 2019

- Used IBM Watson for named entity recognition to define the intents, entities, dialog flows
- Implemented REST API endpoints for the application
- Application Deployment using cloud Azure App service.
- <https://github.com/karansingla06/Admin-Controlled-VISA-Chatbot>

**Multiple Characters Recognition with Tensorflow [Python, Jupyter]:** Building a model to identify Canadian postal codes Sep-Dec 2020

- Used EMNIST-ByClass dataset and built the neural network with Adam optimizer function
- Used OpenCV to preprocess, segment user image and identify the multiple characters
- <https://github.com/karansingla06/Characters-Recognition-NeuralNetworks-Tensorflow>

**Improving Computer Vision accuracy using CNN [personal][Python, Jupyter]:** Feb 2020

- Used multiple data sources like Fashionist dataset, computer generated & real world images
- <https://github.com/karansingla06/ML-AI-Projects/tree/master/ComputerVision>

**Credit card fraud detection, Spam Detection [personal][Python, Jupyter]:** Jan-Feb 2020

- Used Kaggle credit card fraud and spambase dataset respectively
- Used Scikit-learn SVM, Naive Bayes classifiers and got accuracy of 96% and 91% respectively
- Followed the best practices of data cleaning, data exploration, feature selection, model selection, optimizing classifiers, hyper-parameters tuning, model evaluation
- <https://github.com/karansingla06/ML-AI-Projects/tree/master/MLProjects>

## CERTIFICATIONS AND COURSES

- "Applied Machine Learning in Python" - Coursera Apr 2020
- "Applied Text Mining in Python" - Coursera Apr 2020
- "Applied Plotting, Charting & Data Representation" - Coursera Mar 2020
- "Introduction to TensorFlow for AI, ML & DL" - Coursera Feb 2020
- "Spark for Machine Learning & AI" - LinkedIn Learning Feb 2020
- "Building React and Django Apps" - LinkedIn Learning Jan 2020
- "Natural Language Processing with Python for Machine Learning" - LinkedIn May 2018
- Microsoft Certified Solutions Associate (MCSA) - Cloud Azure Nov 2017

## ACHIEVEMENTS & COMMUNITY INVOLVEMENT

- **Specialization in Applied Data Science with Python** from UoMichigan through Coursera May 2020  
<https://github.com/karansingla06/Applied-Data-Science-Specialization-Coursera>
- **Graduate Student Representative** for School of Computer Science at UoWindsor Present
- Participation in Code To Win nation-wide competition at UoWindsor Oct 2019
- Graduate Student Society (GSS) and Indian Students Association (ISA) volunteer Sep 2019
- **Award for Performance Execution Mindset** at UST Global Apr 2019
- Volunteer in raising funds for Kerala flood victims at UST and raised \$10000 Dec 2018