

# Karan Singla

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## SUMMARY OF SKILLS AND EXPERIENCE

- **2.5+ years of full-time Software Development experience**, including 1.5 years in Artificial Intelligence
- Strengths include Python, Java, REST APIs Design and Development, TDD, Machine Learning, Agile Development, Team Collaboration, Communication,
- Specialization in Applied Data Science with Python from University of Michigan Apr '20
- **Languages:** Python (Django, Falcon), Java, C++, HTML/ CSS
- **ML/AI Libraries:** Scikit-learn, Pandas, Matplotlib, Numpy, TensorFlow, Spark, NLTK
- **Databases:** MongoDB, MySQL
- **Process and Tools:** MS Azure Devops, version control using GIT, Scrum and Agile development methodologies

## EDUCATION

**Master of Applied Computing** at University of Windsor (UoW) with **GPA: 91** 2019-Present  
**Bachelor's in Computer Science** at IIIT, Noida, India 2013-17

## WORK EXPERIENCE

**Senior Software Developer at UST Global** Mar '18-Jul '19

Intelligent Computing Environment (ICE): UST's Natural Language Processing (NLP) platform.

- Microservices based pipeline for text mining, named entity recognition, predictive modeling
- Took ownership of backend (API Design and Development)
- Database Design, Code Reviews, Client Management, Collaboration with design teams, CI/CD

**Software Engineer at Infosys** Jul '17-Mar '18

Applications Migration to Azure Cloud

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

**Software Engineer Student Intern at Infosys** Jan-May '17

**Web Developer Summer Intern at Tnine Infotech** Jun-Jul '16

## ACADEMIC AND PERSONAL PROJECTS

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

- Used IBM Watson for creating the intents, entities, dialog flows for the bot
- Implemented REST APIs endpoints for the application
- Application Deployment using cloud Azure App service.
- <https://github.com/karansingla06/Admin-Controlled-VISA-Chatbot>

**E-commerce with React, Django [personal][Python, Javascript, SQL]:** A web based e-commerce application using React, Django.

- User creation, authentication with session management
- REST APIs for CRUD operations on shopping cart
- <https://github.com/karansingla06/Ecommerce-React-Django>

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

- 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>

**Web Search Engine [Java]:** A Java web search engine based on the data collected using web crawling.

- Inverted index using Trie and Hashmap
- Ranking of web pages using Quick select algorithm
- Auto-completion using Trie and spell check using Edit distance algorithm
- <https://github.com/karansingla06/Web-search-engine>

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

- 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]:**

- 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]:**

- Used Kaggle credit card fraud and spambase dataset respectively
- Trained with SVM, Naive Bayes classifiers and got accuracy of 96% and 91% respectively
- <https://github.com/karansingla06/ML-AI-Projects/tree/master/MLProjects>

## CERTIFICATIONS AND COURSES

- |  |         |
|--|---------|
| • "Applied Machine Learning in Python" - Coursera                                  | Apr '20 |
| • "Applied Text Mining in Python" - Coursera                                       | Apr '20 |
| • "Applied Plotting, Charting & Data Representation" - Coursera                    | Mar '20 |
| • "Introduction to TensorFlow for AI, Machine Learning & Deep Learning" - Coursera | Feb '20 |
| • "Spark for Machine Learning & AI" - LinkedIn Learning                            | Feb '20 |
| • "Building React and Django Apps" - LinkedIn Learning                             | Jan '20 |
| • "Natural Language Processing with Python for Machine Learning" - LinkedIn        | May '18 |
| • Microsoft Certified Solutions Associate (MCSA) - Cloud Azure                     | Nov '17 |

## ACHIEVEMENTS & COMMUNITY INVOLVEMENT

- |   |                 |
|---|-----------------|
| • <b>Specialization in Applied Data Science with Python</b> from UoM through Coursera | Apr '20         |
| • <b>Graduate Student Representative</b> for School of Computer Science at UoW        | Sep '19-Present |
| • Participation in Code To Win nation wide competition at UoW                         | Oct '19         |
| • Volunteered for Community Clean Up event at UoW                                     | Sep '19         |
| • Graduate Student Society (GSS) and Indian Students Association (ISA) volunteer      | Sep '19         |
| • <b>Spot Award for Best Performance</b> at UST Global                                | Apr '19         |
| • Volunteer in raising funds for Kerala flood victims at UST and raised \$10000       | Dec '18         |