Karan Singla

Address: 2984 Donnelly Street,
Windsor, Ontario N9C 1L8
Phone: +1 519-977-2706

Website: https://karansingla.com
Email: singlak@uwindsor.ca
LinkedIn: linkedin.com/in/karan-singla/
Github: github.com/karansingla06/

Summary of Skills and Experience

- **2.5+ years of full-time Software Development** experience, including 1.5 years in Artificial Intelligence (AI)
- Languages: Python, JavaScript, Java, C/C++, HTML/ CSS
- Cloud Services: Microsoft Azure, IBM
- Frameworks/Libraries: Django, TensorFlow, Spark, MLlib, Pandas, Matplotlib, Seaborn, React, Git, Pytest, Docker, Nltk, Numpy, BeautifulSoup, Jupyter Notebook, Keras
- Databases: Mongo, MySQL
- Interpersonal skills developed through collaboration with team members in an Agile environment

Education

- **Master of Applied Computing** at University of Windsor (UoW) with **GPA: 91** *2019 - Present*
- **Bachelors in Computer Science** from JIIT, Noida, India *2013 - 2017*

Work Experience

Senior Software Developer at UST Global *Mar 2018 - Jul 2019*

Intelligent Computing Environment (ICE): UST's Natural Language Processing platform.
- Microservices based pipeline for data processing, named entity recognition, predictive models
- Integration of mitie, crf, spacy, corenlp models for default and custom entity recognition, involving tagging, training, predicting, pos tagging
- Using Python framework Falcon with MongoDB to create all the RESTful services, in an Agile-scrum environment
- Building Docker containers for the application and sonar test coverage

Anthem Virtual Assistant (Proof of Concept): A chat-bot for the healthcare giant Anthem to answer user queries regarding insurance plan & coverage details.
- Parsing PDF documents to HTML to get data access by sections
- Used BeautifulSoup to extract the required data
- Used Rasa for Natural Language Processing
- Used Python with MongoDB for development in an Agile-scrum environment

Software Engineer at Infosys Ltd. *Jul 2017 - Mar 2018*
Applications Migration to Azure Cloud
- Creating virtual machines, vnets, network security groups on Azure for the applications
- Publishing the applications, databases on virtual servers
- Testing the migrated application for bugs

Software Engineer Student Intern at Infosys Ltd. *Jan 2017- May 2017*
Web Developer Summer Intern at Tnine Infotech *Jun 2016 - Jul 2016*

Academic and Personal Projects

1. **Admin Controlled Chatbot using Chat:** An admin controlled chatbot to help international students with features like admin can make any changes to the bot using a secret key through the chat panel itself.
   - Used IBM Watson for creating the bot
   - Used Django, Python to consume the webhook call and REST APIs for CRUD operations on bot
   - Application hosted on cloud using Azure App service.
   - https://github.com/karansingla06/Admin-Controlled-VISA-Chatbot

References available upon request

2. **YouTube Statistical Data Analysis:** Analysis done on YouTube most popular videos data and also on COVID-19 data.
   - 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
3. **Web Search Engine:** 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
4. **Multiple Characters Recognition with Tensorflow:** A learning project to gain a better understanding of tensorflow and neural networks.
   - Used EMNIST-ByClass dataset and built the neural network with Adam optimizer function
   - Used OpenCV to preprocess user image and to segment the multiple characters present in the image
   - https://github.com/karansingla06/Characters-Recognition-NeuralNetworks-Tensorflow
5. **Improving Computer Vision accuracy using CNN:** A learning project to explore image recognition
   - Used multiple data sources like Fashionist dataset, computer generated & real world images
   - https://github.com/karansingla06/ML-AI-Projects/tree/master/ComputerVision
6. **Credit card fraud detection:** A learning project for exploring machine learning.
   - Used Kaggle credit card fraud dataset, support vector machine as the classifier
   - Achieved a 96% accuracy after data pre-processing, data visualization, training dataset balancing
   - https://github.com/karansingla06/ML-AI-Projects/tree/master/MLProjects
7. **Spam detection:** A learning project
   - Used Kaggle spambase dataset, Multinomial and Gaussian Naïve Bayes as the classifier
   - Achieved 88% accuracy for Multinomial and 81% accuracy for Gaussian
   - https://github.com/karansingla06/ML-AI-Projects/blob/master/MLProjects/NB_spamDetection.ipynb

Certifications

- "Applied Plotting, Charting & Data Representation" - Coursera   *Mar 2020*
- "Introduction to TensorFlow for AI, Machine Learning and Deep Learning" - 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 Learning   *May 2018*
- "Understanding Machine Learning with Python" - Pluralsight   *Apr 2018*
- Earned Microsoft Certified Solutions Associate (MCSA) credential for Cloud Azure   *Nov 2017*

Achievements

- **Graduate Student Representative** for School of Computer Science at UoW   *Sep 2020 - Present*
- Spot Award for **Best Performance** at UST Global   *Apr 2019*
- Student Branch member of Institute of Electrical and Electronics Engineers (IEEE)   *2015 - 2016*
- Won gold medal in volleyball Fun Sports Meet competition at JIIT   *2016*
- Member of Knuth Programming Hub at JIIT   *2014-2015*

Campus and Community Involvement

- Participated in national level Code To Win competition at UoW   *Oct 2019*
- Volunteered for Community Clean Up event at UoW   *Sep 2019*
- Graduate Student Society (GSS) and Indian Students Association (ISA) volunteer at UoW   *Sep 2019*
- Volunteer in raising funds for Kerala flood victims at UST and raised $10000   *Dec 2018*
- Volunteer in organizing events with NGO Saksham at Raahgiri for blind children   *Apr 2015*
- Hospitality team member at International Conference on Contemporary Computing held at JIIT   *Sep 2016*

References available upon request