

Syed Hamza Zaidi

SOFTWARE ENGINEER · SENIOR AT BITS PILANI

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Work Experience

Software Engineer Contractor

Hyderabad, India

SALESFORCE

Oct. 2021 - Present

- Integrating the Salesforce Einstein Bot API with DPXBot for improved AI/ML capabilities and better user experience.
- Using Postman for API development and documentation.
- Redesigning the NLP Preprocessing for the Information Retrieval models to increase the Query Resolution Rate.

Software Engineer Intern

Hyderabad, India

SALESFORCE

Jun. 2021 - Jul. 2021

- Designed and implemented a Federated Search Information Retrieval model using Python to rank documents retrieved from multiple databases for DPXBot—an internal use Developer Productivity Slack bot. Model is currently in production.
- Designed a Natural Language Processing model to recommend documents through Semantic Textual Similarity using Word2Vec.
- Automated the testing of the Information Retrieval models against multiple datasets using a Python script with command line arguments.

Projects

Secure Face Recognition - Salesforce InTurn Innovate Hackathon

COMPUTER VISION

June 2021

- Designed a seamless authentication system by coupling a face recognition model (OpenFace) with a custom liveness detection algorithm.
- The model was served using a Flask Backend with a Salesforce Lightning Web Components based Frontend.
- The custom liveness detection model captures and compares the light reflected on the face with the changing background colors on the login page through real-time statistical modelling.
- The model was shown to work against still images, videos, and deepfake spoofing attacks.
- The project won first position in the Salesforce InTurn Innovate Hackathon.

K-Means Clustering Optimisation on Vector Space Model

INFORMATION RETRIEVAL / MACHINE LEARNING

March 2021

- Built a Vector Space model of the Wikipedia dataset in Python.
- Optimised query search time by a factor of 100 by segmenting documents using Mini-batch K-Means clustering.
- Reduced the memory usage of the model by 99.54% by converting the Vector Space Model to an Inverted Index Model.
- Implemented Inc-ltc scoring for document ranking.

Art Generation using Neural Style Transfer

TRANSFER LEARNING / CONVOLUTIONAL NEURAL NETWORKS

July 2020

- Implemented a Deep Learning model to extract the artistic style from an image, the content from another, and blend them together to generate a new image using Tensorflow, following the paper titled 'A Neural Algorithm of Artistic Style' by Leon A. Gatys, et al.
- Implemented a grid-search algorithm to find the optimal hyperparameter values.

Education

Birla Institute of Technology & Science, Pilani

Pilani, India

B.E. (HONS.) IN ELECTRONICS & INSTRUMENTATION ENGINEERING

Aug. 2018 - Jul. 2022

• Courses

Data Structures & Algorithms, Object Oriented Programming, Operating Systems, Information Retrieval, Neural Networks & Fuzzy Logic, Graph Mining, Discrete Structures for Computer Science, Digital Image Processing, Combinatorial Mathematics.

• Head Teaching Assistant for Neural Networks & Fuzzy Logic

Managed a team of 12 Teaching Assistants to design assignments and workshops for 120+ students enrolled in the course.

Delhi Public School, Greater Noida

Greater Noida, India

PHYSICS, CHEMISTRY, MATHS, ENGLISH, AND COMPUTER SCIENCE

Aug. 2013 - Mar. 2017

- **All India Senior School Certificate Examination** - 94.4%
- **All India Secondary School Examination** - 9.4/10 CGPA

Skills

Languages Python, C, C++, Java, Go

Frameworks NumPy, Pandas, PyTorch, Tensorflow, Keras, Scikit-learn, Matplotlib, OpenCV, Flask

Version Control git

Markup \LaTeX , Markdown

Certifications

Postman Student Expert

badgr

POSTMAN

Nov. 2021

- Completed the Student Expert challenge.
- Created a full-stack web application with API endpoints, and a Postman collection and environment to test the API.
- Scripted multiple API requests together inside a Postman collection.
- Created test assertion scripts to double-check API responses.

Deep Learning Specialisation

Coursera

DEEPLARNING.AI

July 2020

- A five course specialisation covering the concepts of Deep Learning with projects on designing and implementing Computer Vision, Natural Language Processing, and Speech Recognition models.

Data Analytics with Python

CSD, BITS Pilani

CENTRE FOR SOFTWARE DEVELOPMENT, BITS PILANI

May 2019

- Course topper in a semester long hands-on course focusing on the theory and implementation of various Machine Learning algorithms including Linear Regression, Logistic Regression, Decision Trees, and KNNs.
- Designed an IMDB Movie Rating predictor using Logistic Regression as a capstone project for the course.