

Manish Sihag

Data Scientist

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SUMMARY

As a self-motivated and self-taught Data Scientist, I have been doing research in the field of AI in drug discovery by combining my knowledge from Chemical Engineering and passion for AI. With more than one year of industry experience, I am inclined towards a research career in the field of Artificial Intelligence.

PROJECTS

Reaction Product Prediction

12/2018 - 02/2019 Hyderabad

Predicted main- and side- products of a chemical reaction using Deep Learning algorithms as well as manual feature selection for molecules

- Researched and developed various Deep Learning architectures like Graph Convolutional Networks(GCNs) & Recurrent Neural Networks
- The model made 10 predictions for each reaction. More than 90% of the time, correct products were among these predictions

ADME Prediction

02/2019 - 03/2019 Hyderabad

Predicted Pharmacokinetic properties like Metabolism rate, Absorption coefficient, Distribution coefficient and Bioavailability for potential drugs

- Beforehand knowledge of such properties in drug discovery trials can save a significant amount of time & money resources for researchers
- Developed different variations of Graph Convolutional Networks like Gated, Attention and Gated-Augmented-Attention Networks(GAGCNs)
- The models were able to distinguish between drugs with higher and lower values of properties like Bioavailability

Email Processing and Classification

09/2018 - 12/2018 Hyderabad

Processed and classified customer emails for a client in 20+ categories such that each email is automatically forwarded to appropriate division

- Established Machine Learning frameworks for classifying emails using architectures like Self-Attention Networks, RNNs, LSTMs and GRUs
- Automation of this process saved hundreds of work-hours weekly

COURSES

Neural Networks and Deep Learning

Coursera

Improving Deep Neural Networks

Coursera

EDUCATION

Chemical Engineering
IIT Bombay

07/2014 - 07/2018

CPI
6.33 / 10

EXPERIENCE

Data Scientist

Aganitha Cognitive Solutions

09/2018 - Ongoing Hyderabad

Providing AI solutions to enterprises

Machine Learning Intern

Eli India

05/2017 - 07/2017 Faridabad

- Extracted phrases from medical corpus for developing context-sensitive browser search
- Trained models for classifying medical terms into different categories like CPT and HCPCS
- Carried a number of experiments related to sentence generation for developing chat bots

SKILLS

Python Machine Learning Docker

Tensorflow Data Analysis Octave

AI in Drug Discovery Bash/Shell R

Natural Language Processing GitHub

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