

RANJITHKUMAR HIEMATH

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TECHNICAL EXPERIENCE

Associate Data Scientist, United Health Group - Optum, India: May 2019 - July 2021

- Created Intelligent Automation tools to enhance insurance processing workflows, mainly from contracts. Reducing manual effort and time taken to process 100,000 contracts.
- Collaborated within team to devise a question answering tool, scans all contracts in Database to come up with appropriated results for a query, helping to assess huge corpus(30,000) of contracts together within few minutes.
- Researched on Object detection models Fast R-CNN, YOLO to detect and extract tabular data, having huge impact to detect variety of tables in contracts across 100,000 contracts.

Data Science Analyst, Xceedance, India: November 2017 - May 2019

- Developed an end-to-end solution to extract various entities from free-flowing text, to automate submission process. Processing around 35,000 emails.
- Implemented mortality simulation for a client to assess profit generated by purchasing real estate assets of elderly clients in America. Simulation developed in python was 3 times better than earlier VBA version.

KEY SKILLS

Programming Languages: Python

Machine Learning Algorithms and models: Linear regression, Logistic regression, Decision tree, Random Forest, LSTM, CNN, RNN, BERT, Universal Sentence Encoder, Word2vec, doc2vec, Object Detection, boosting models.

Data bases: SQL, NOSQL (mongodb).

EDUCATION

Master of Science: Artificial Intelligence, University at Buffalo, The State University of New York, Expected December 2022

- GPA 3.77.

Bachelor of Engineering: Information Science and Engineering, Visveswaraya Technological University, Graduated June 2016

- Aggregate 70%.

PROJECT

Optum/Contract Intelligence: Python

- Created an end to end solution to process contracts and identify important clauses quickly.
- The process involved following modules, Optical character recognition(OCR), Segmentation, Storing free flowing text data, Cleaning and obtaining context using NLP, Use machine learning models to classify a paragraph to clauses, pushing results to salesforce user interface.
- The solution was packaged using docker and flask along with UWSGI provided the necessary gateway/endpoints
- Technologies leveraged : Python, flask, mongo dB, NLP, random forest,XGB,Universal sentence Encoder, Neural networks, LSTM, Faster R CNN, Object detection models, OpenShift, docker.

Xceedance/Inext: Python

- Devised an end-to-end solution to extract various entities from free-flowing text(email chains), to automate submission process.
- The process involved OCR, text cleaning, annotation, tokenization, developing context-based embeddings using keras embedding layers, Word2vec from gensim, developing an entity recognition engine to identify entities, storing results in a SQL db, verifying and analyzing data for re-training and other model improvements.
- Technologies leveraged: Python, flask, SQLite, tesseract - ocr, bi-directional LSTM etc.