www.github.com/rajathpatel23
www.linkedin.com/in/rajat-patel

RAJAT PATEL

(443) 253-7424
rpatel12@umbc.edu

WORK EXPERIENCE

Data Scientist, Intern **Interos Inc,** Arlington, VA **Jun 2019 – Aug 2019**

- Built an intelligent product crawler tool that uses both unsupervised and supervised machine learning to learn the HTML structure of the webpage and identify the product names with 75% accuracy
- Created a pipeline to integrate the product crawler tool with the knowledge base to enhance mapping timelines by 85%
- Implemented data ingestion pipelines and statistical machine learning models in collaboration with senior data scientist, to predict supply chain risk factors like relationships and operations

Graduate Research Assistant **University of Maryland, School of Medicine,** Baltimore, MD **May 2018 – May 2019**

- Designed and developed deep learning algorithm that predicts patient's need for massive transfusion within 1st hour and first 24 hours post trauma by studying first 15 mins of PPG signal
- Developed multi-task machine learning algorithms by studying vital signs of trauma patients to predict 7 different outcomes and discovered relationships between the outcomes through different statistical regularization techniques.
- Collected real time patient data from database of size 150TB and prepared datasets for machine learning algorithms

Software Engineer **Larsen and Toubro Infotech,** Mumbai, India **Jan 2015 – Jul 2017**

- Built python libraries for robotic process automation applications, reducing manual work efforts by 80%.
- Implemented shell scripts to automate day-to-day OS and Database administrative tasks, resulting in reduction of manual activities by 20%.
- Developed proof of concepts on distributed SAP data migration techniques as a part of the work with SAP Center of Excellence team in the Infrastructure Management Services (IMS) business unit

TECHNICAL SKILLS

Programming Languages:	Python, Go, JavaScript, MATLAB, Shell Scripting, SQL, C++
Frameworks & Technologies:	TensorFlow, PyTorch, NumPy, SciPy, Scikit-learn, Pandas, Scrapy, Flask
Tools & Database:	Jupyter, Git, Visual Studio, PyCharm, Vim, MongoDB, SQLite, MySQL

EDUCATION

Baltimore, MD **University of Maryland, Baltimore County** **2019**

M.S. in Computer Science

Coursework: Design & Analysis of Algorithms, Advanced operating systems, Advanced Computer Architecture, Machine Learning, Natural Language Processing, Information Retrieval, Data Science

Kolhapur, India **Shivaji University** **2014**

B.E. in Electronics and Telecommunication Engineering

Coursework: Data structure and Algorithms, Digital Design, Microcontroller, Image Processing, Embedded Systems

PROJECTS

Combining knowledge graph embedding with fine-grain entity type prediction for improving downstream NLP applications (Master's Thesis) ***Python, TensorFlow, PyTorch, OpenIE***

- The work aims to learn real-valued representations for structured facts from a knowledge graph in form of embeddings
- Perform joint learning of knowledge graph embedding with fine grain entities types to reveal dubious facts in databases
- Use the learned entities to improve downstream natural language processing applications

Image-Rel Predictor ***Python, TensorFlow, keras, NumPy, Concept Net***

- Image relationship finder is a deep learning algorithm which uses both image and recognized entities in the image to predict a relationship of the image with entities within a knowledge base

PPGNET: Massive Transfusion Predictor for trauma patients ***Python, TensorFlow, MATLAB, Keras, SciPy, NumPy, Pandas***

- A deep learning model which can assist in automatic feature extraction from first 15 minutes of clinical physiological waveforms like PPG for predicting blood transfusion in trauma patients, aiding clinician in taking proactive measures

Sentiment Analysis on Amazon Product Reviews ***Python, scikit-learn, NumPy, NLTK, Scrapy, Mongo DB***

- Developed ensemble of statistical machine learning models for performing sentiment analysis on amazon product reviews