# **Jithin Varghese**

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### **SKILLS**

Python, PyTorch, Pandas, Transformers, SentenceTransformers, scikit-learn, NumPy, NLTK, Spacy, Playwright, asyncio, Redis, and Scrapy.

NLP, Machine Learning, Deep Learning, Image Processing, Web Scraping, Data wrangling, Git, Project Management, and Problem-Solving.

FastAPI and onnxruntime (hands-on-experience).

### **EXPERIENCE**

• Turbolab Technologies Private Limited

Ernakulam, Kerala-India

Associate Python Developer

May 2021 - Present

- □ Developing product matching algorithms for an e-commerce market intelligence platform using NLP, machine learning, and deep learning techniques.
- ☐ Inferring technical journals and blogs related to problems and implementing the best workaround for the same.
- ☐ Fine-tuning Language models like BERT and sentence transformer models for downstream tasks like classification and semantic similarity.
- ☐ Gathered high-quality training data using web scraping techniques and annotated training data using weak supervision and rules, thereby reducing the cost of manual labeling.
- □ Developed web crawlers for big data gathering and scraped relevant products for a search using NLP, regex, and rules. Saved 4.5k unwanted product page requests in every quarterly schedule data gathering by sending requests only to the relevant products for a search.
- ☐ Data Wrangling using pandas and Numpy.
- Keltron Controls Division

Aroor, Kerala-India

Graduate Apprentice-Mechanical Engineering

Dec 2018 - Dec 2019

☐ Design and Development of Pneumatic Actuator assembly for various projects.

#### Kaggle, GitHub, and Medium Contributions

Kaggle Datasets Expert and Contributor

## **Competitions:**

- Natural Language Processing with Disaster Tweets (Ongoing-Knowledge): Rank: 57th of 1003.
- U.S. Patent Phrase to Phrase Matching (Completed): *Rank*: 1747th of 1889.
- Jane Street Market Prediction (Completed): Rank: 3109th of 4245.

#### **Notable Notebook and Datasets:**

- To predict whether a tweet is related to a disaster or not using pre-trained language model BERTweet and PyTorch
- $\circ \quad \underline{https://www.kaggle.com/datasets/jithinanievarghese/drugs-side-effects-and-medical-condition}\\$
- ${\color{red} \bullet} \ \underline{ https://www.kaggle.com/datasets/jithinanievarghese/critic-reviews-of-all-time-tv-shows-metacritic} \\$
- GitHub
  - Web Scraping with product search relevance using NLP, rules, and image classification
  - Fast API and ONNXRUNTIME PyTorch Image classification Model Deployment
  - Scrapy e-commerce web crawler
- Medium
  - Hard-Mining Negatives for Semantic Similarity Model using Sentence Transformers

### **EDUCATION**

• College of Engineering Adoor (Cochin University of Science and Technology)

Bachelor of Technology in Mechanical Engineering; CGPA: 8.01/10

Kerala, India 2014 – 2018

Mount Bethany Public School, Kumbhazha

Kerala, India

Higher Secondary Education (IT-Maths): Percentage: 91%

2012 - 2014