Astarag Mohapatra

(+1) 812-381-2958
astmohap@iu.edu Profile Astarag Mohapatra Athe-kunal Athe-kunal

Education

Indiana University at Bloomington **Aug 2022 -Present**
Master in Data Science *GPA:4.0/4.0*
Courses: Machine learning, Applied Algorithms, Portfolio Management, Equity Markets, Time Series Analysis

National Institute of Technology, Rourkela **Jun 2017 – Aug 2021**
B.Tech in Mechanical Engineering (Major) *CGPA: 8.22/10.0*
B.Tech in Electronics and Communication Engineering (Minor) *CGPA: 7.94/10.0*

Technical Skills

Programming: Python, PyTorch, sklearn, Tensorflow, R programming, HTML/CSS, Selenium, JAX, JavaScript, C++, PostgreSQL
Developer Tools: Kubernetes, Ray, Weights Biases, Google Cloud Platform, Jupyter, GitHub, Docker, MLOPs

Experience

BeiGene, California **May 2023 – August 2023**
Advanced Analytics Intern *Full-time*

- Developed a data-aggregation platform that can help my Commerical and Business Operations team to monitor the sentiment of our drug. We worked on aggreagation of data from various sources like PubMed publications, OpenCMS, LinkedIN and Twitter.
- Analyzed all these information using BERTopic for topic modelling and aspect-based sentiment analysis using OpenAI GPT Model, to track sentiment of the drug over time. The in-house development reduced cost 10X and helped the company save nearly $50K per year moving forward.

Salesken, Bengaluru, India **Dec 2021 - Apr 2022**
Machine learning and Reinforcement learning Intern *Internship*

- Integrated end-to-end hyperparameter optimization pipeline using the ***Population based algorithms*** and **Ray library** resulting in an average 7% increase in accuracy for the automated sales agent model.
- Developed *politeness language classification model* using the hugging face library and transformer models resulting in 16% increase in F1-score compared existing organization language models
- Build microservices using Docker, Kubernetes and GCP Platform. Reduced the ready-to-release time from 2 hours to 45 mins through automation in the production pipeline .

University of Liège, Belgium **Jun 2021 – Dec 2021**
Visiting Reinforcement Learning Research Intern *Remote Internship*

- Developed a deep reinforcement learning trading agent in collaboration with Prof. Damien Ernst using Optuna and Stable Baselines3, resulting in 60% increase in Sharpe Ratio compared to the Industrial average benchmark
- Analyzed the integration of Google trends as a proxy for market sentiment analysis and improved the Sharpe ratio by 13% for volatile assets in Crypto-trading compared to the baselines.

Publications and Open-Source Contributions

ASME Journal of Solar Energy Engineering

- Paper titled *Design and Performance Analyses of Evacuated U-Tube Solar Collector Using Data-Driven Machine Learning Models*. GitHub page for the paper implementation here
- **Authors :** $AstaragMohapatra^1$, $P.K.STejes^2$, $ChaturGembali^3$,$B.KiranNaik^4$

AI4Finance Foundation, FinRL and FinRL-Meta

- Contributed *blog posts*, *paper explanations*, trading demos and bug fixes for the FinRL and FinRL-Meta library

Llama Hub

- Contributed the SEC Filings loader for Llama Hub

Certification

- LLM101x: Large Language Models: Application through Production, Databricks
- Building LLM Powered Applications, Weights and Biases
- Deep Learning Specialization DeepLearning.AI, Coursera
- Reinforcement learning Specialization University of Alberta, Coursera
- DeepLearning.AI TensorFlow Developer, Coursera
- MLOPs Specialization DeepLearning.AI, Coursera
- Investment Management with Python and Machine Learning, EDHEC Business School
- Database Design and PostgreSQL
- Mathematics for Machine Learning, Coursera