ALI SHIBLI

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OBJECTIVE

Machine Learning Engineer with 3+ years of experience seeking a new full-time research position.

EXPERIENCE

Data Scientist February 2022 - Present
Ericsson, Global AI Accelerator *Stockholm, SE*

- Developing ML pipelines for teleco-AI applications, particularly enhancing the radio infrastructure by forecasting various KPIs, such as network traffic, path loss, and signal strength.
- Worked closely with stakeholders on optimizing the signal path loss and reduced the total energy consumption by 8%.
- Published 3 internal packages and 4 patents in review related to new methods implemented in telecom, including computer vision, satellite imagery, graph networks, and time series forecasting.

Machine Learning Mentor November 2021 - January 2022
KTH, PECA Project *Stockholm, SE*

- Designed machine learning upskilling workshops for more than 30 engineers including python notebooks and well-prepared material covering the basics in AI to advanced topics, as an initiative to support life-long learning of AI for individuals from different backgrounds.

Data Scientist June 2021 – September 2021
Ericsson, Global AI Accelerator *Stockholm, SE*

- Developed and integrated a Question-Answering Recommendation System within the internal Ericsson's communication network using Sentence-BERT.
- Trained and benchmarked several state-of-the-art Natural Language Processing BERT-based models, in addition to developing the Telecom Question Answering Dataset (TeleQuAD).

Machine Learning Research Engineer November 2020 - April 2021
KTH, Robotics, Perception, and Learning LAB *Stockholm, SE*

- Researched and developed a graph neural network model for webly-supervised visual relationship detection in images and video. The model detects objects in images using a CNN that form the nodes of the graph, and the edges are the text relationships between the detected objects.
- Developed and released a python package image-caption-scraper for web scraping images with captions for training computer vision and NLP models. Over 3000 people have used it so far.

Network Engineer Intern June 2019 - August 2019
Touch Telecom *Beirut, LBN*

- Performed troubleshooting activities to analyze and resolve fault reports in the cellular network, by analyzing data acquired from the sites and drive tests to detect hardware issues.

EDUCATION

Master of Machine Learning, KTH Royal Institute of Technology 2020-2022
- Master thesis topic: developed a multi-modal deep learning method for forecasting telecom network traffic using satellite imagery, computer vision, and time series. The work was patented at the company.
- Teaching Assitant: AI Course

Bachelor of Mathematics, American University of Beirut 2016 - 2020
- Relevant coursework: algebra and differential geometry.
- Teaching Assistant: Higher Geometry

Bachelor of Computer and Communications Engineering, American University of Beirut 2015 - 2020
Bachelor thesis topic: developed a solution for precision agriculture that tackles parasites on the trees, by implementing a computer vision model and an autonomous drone system. The project won the best final year project in the engineering department.

SELECTED PROJECTS

Recommendation Engine: Built a multi-input tool to search and recommend movies from Netflix, songs from Spotify, and books from GoodReads, by developing a hybrid neural network model based on collaborative filtering and content-based recommendation. It uses SBERT for embedding the meta-data of the user's preferences and Neural Collaborative Filtering for comparing with other similar users' tastes with deep learning. All the models were implemented and tested using PyTorch, PySpark, and boolean queries. The different models were trained on 3 datasets scrapped from Netflix, Spotify, and GoodReads. You can find an example of Netflix Recommender Engine here.

Tree-D developed an autonomous drone that navigates around trees detecting and shooting parasite nests with a high accuracy (85% in real time). The model was based on Yolov3, and the project won the best final year engineering project award in my Bachelors Degree in 2019. You can find a demo here.

Lebanese Sports Pitches Developed a mobile app to search for and book sports pitches by using Java, Android Studio, and Firebase for storage and analytics. The app was deployed on Android and was tested on 1000 virtual users to validate the performance.

SKILLS

Programming Languages	Python, Java, C++, SQL
ML Frameworks	MLOps, PyTorch, Tensorflow, Keras, Numpy, Scikit-learn, Pandas
Cloud	GCP, AWS
Software development	Flask, Django, Android Studio
Operating Systems	Linux, Windows, Mac

EXTRA-CURRICULAR ACTIVITIES

- Multi-sport athletic including biking, tennis, working out, hiking, and football.
- Music follower and player of the violin.
- Frequent participant in google hash code competition and like competitive programming.
- Participant in the ESCWA World Model UN for sustainable development 2017 in Lebanon.

AWARDS AND CERTIFICATIONS

- Karl Engver's Foundation Scholarship Award for Academic Excellence, Sweden 2021/2022.
- Hattrick award in AI course at KTH, Sweden 2020.
- First place on American University of Beirut IDEAS 2019 startup competition (article on Tree-D Project), Lebanon 2019.
- Dean's Honor List, AUB, 2019.