ALI SHIBLI

+46 072 441 62 95 ◇ Stockholm, Sweden
shibli@kth.se ◇ linkedin.com/in/ali-shibli-405a84151 ◇ alishibli97.github.io ◇ github.com/alishibli97

INDUSTRY AND RESEARCH EXPERIENCE

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

- Developed machine learning pipelines for telecom-AI applications, focusing on network performance metrics.
- Worked collaboratively with stakeholders to develop RLOps, a Reinforcement Learning System using MLOps, for telecom applications.
- Led a team in developing predictive models for network nodes software upgrades scheduling. This is based on traffic pattern forecasting, resulting in improved network performance and significant reduced service impact.
- Filed 2 patents and a third in review related to ML methods adopted in telecom. The patents include topics in computer vision and satellite imagery, graph networks, and time series forecasting.

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

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

Data Scientist Intern 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 to the date.

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 Science, Machine Learning, KTH Royal Institute of Technology **2020-2022**

- Thesis: "Hybrid Deep Learning Model for Cellular Network Traffic Prediction: Case Study using Telecom Time Series Data, Satellite Imagery, and Weather Data"
- Teaching Assistant: Artificial Intelligence

Bachelor of Engineering, Computer and Communications Eng., American University of Beirut **2015 - 2020**

- Thesis: The Utilization of Drones to Monitor the Health of Pine Trees
- Best Final Year Project of 2019 Engineering Batch

Bachelor of Science, Mathematics, American University of Beirut **2016 - 2020**

- Relevant coursework: Algebra and Differential Geometry.
- Teaching Assistant: Higher Geometry

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 scraped from Netflix, Spotify, and GoodReads. You can find an example of the 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 Bachelor's Degree in 2019. You can find a demo here.
- **Lebanese Sports Pitches**: Developed a mobile app to search for and book sports pitches 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 performance.

SKILLS

Programming Languages	Python, Java, C++
Machine Learning Frameworks	PyTorch, TensorFlow, Keras, NumPy, Scikit-learn, Pandas
Computer Vision	Image Processing, Detection, Classification, Segmentation, Satellite Imagery
Natural Language Processing	Text Preprocessing, Sentiment Analysis, NER, Language Modeling
Distributed Computing	Apache Spark, Hadoop, Parallel Computing
Statistical Analysis	Hypothesis Testing, Statistical Modeling, Experimental Design
Software Development	Git, Software Engineering Principles
Data Visualization	Matplotlib, Seaborn, Tableau
Cloud and MLOps	GCP, AWS

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.