

ALI SHIBLI

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<https://alishibli97.github.io/>

Education

Master's: KTH Royal Institute of Technology, Sweden (2020-2022)

Machine Learning (master thesis in computer vision on satellite imagery and deep network interpretability)

Bachelor's: American University of Beirut, Lebanon (2015-2020)

Double Major in Computer and Communications Engineering and Pure Mathematics (Artificial Intelligence track)

Professional Experience

Master thesis student: Ericsson – Sweden (February 2022-June 2022)

- Collect satellite images from Sentinel-2 satellite for cities in Switzerland (Zurich and Geneva)
- Apply CNN and vision transformer models to generate representations of the images regions.
- Combine the vision representations with telecom traffic data to predict the best 5G site configurations.

Machine Learning Mentor: PECA Project (Professional Education Content Alliance) – Sweden (December 2021 - January 2022)

- Prepared an introductory course on machine learning and deep learning with the latest technologies and topics in the field
- Mentored the course for over 30 engineers from different companies in Sweden

Teaching Assistant: EECS department at KTH – Sweden (August 2021 - November 2021)

- *DD2380 Artificial Intelligence course*: presented tutorials and lab sessions on topics of Hidden Markov Models, Reinforcement Learning, and Search in Games.

R&D Machine Learning Engineer: Ericsson HQ– Sweden (June 2021 - August 2021)

- Developed a Question-Answering chatbot system for Ericsson based on Sentence-BERT model and trained on telecommunications data.
- Contributed to developing the internal dataset for Ericsson by labeling question-answering pairs from the text dataset (over 1000 QAs).
- Developed the Ericsson dataset further by scraping new data from the FAQ platform (around 10,000 QAs).

Research Engineer in Machine Learning: RPL Lab at KTH – Sweden (October 2020 - April 2021)

- Developed a graph neural network for predicting visual relationships from images that achieved state-of-art results in recall and precision.
- Scraped and collected a dataset of 50,000+ images that can be used for visual relationship detection task.
- Developed an open source framework for scraping images with captions from Google, Yahoo, Flickr, and other search engines ([image caption scraper](#))

Quality Service and Network Management Engineer: Touch – Lebanon (June 2019 - August 2019)

- Maintained the mobile network over Lebanon by analyzing data received from the network sites.
- Reported fault reports upon capturing interference patterns and jammers in the network.
- Maintained the hardware of the sites.

Projects Accomplished

1. **Tree-D**: autonomous drone that navigates around trees detecting parasites and their nests. The detection algorithm was yolov3 and it achieved 80% accuracy in real time. The navigation and parasite treatment algorithms were self-written. The project was awarded as the best engineering final project in the bachelor's degree.
2. **Image-Caption-Scraper**: open source package in Python that allows users to download images with captions from web search engines (Google, Yahoo, Flickr). This accelerates applications in image captioning and visual relationship detection. The package was tested for around 50 thousand images.
3. **Netflix-Recommend**: recommendation system for Netflix movies based on a hybrid model, that combines neural collaborative filtering and content-based recommendation. To evaluate the system, the model was able to predict similar movies to a personal watch-list movie set.
4. **Tele-Bot**: BERT-based question-answering chatbot at Ericsson. The model achieved state of the art results of (recall, precision, and nDCG), but since the data was very noisy, work was still being done to optimize the performance before deployment in the company.
5. **LSP**: *Lebanese Sports Pitches* mobile app to connect sports pitches (football and basketball) in Lebanon allowing online booking and reservations.

Achievements & Awards

- *image-caption-scraper* 2021 ([image caption scraper](#))
- Hatrick Award in AI course at KTH 2020
- First place on AUB startup competition 2019 ([award](#))
- Second place on Darwazah Lebanese competition 2019 ([award](#))
- Semi-finalist on BeryTech Beirut competition 2019
- Dean's honor list, AUB

Areas of Expertise

- Computer vision
- Natural language processing
- Recommender systems
- Data analysis
- Cloud computing

Other Areas I Worked In

- Databases
- Mobile and web development
- Distributed computing

Technical Expertise

- Programming languages: Python, Java, C++, Scala
- ML Packages: PyTorch, Tensorflow, Keras
- Distributed Computing: Spark
- Web development: Flask & Django (in Python), html, CSS, JavaScript
- Mobile development: Java
- Databases: SQL, NoSQL (Firebase)
- Cloud computing: GCP, AWS, vast.ai
- OS: Linux, Windows, Mac

Extra-Curricular Activities

- Football
- Ice skating
- Working out
- Violin
- Hiking
- Movies and series

Languages

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| • English | C2 |
| • Arabic | C2 |