# SHERLY

### **Profile**

Statistics major who went on to pursue a career in Software Engineering. 3 years of experience in Software Engineering and around three years of experience in Machine Learning field professionally. Currently doing research under the employment of ETH Zurich in the field of Computer Vision.

## **Contact Details**

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## **Publications**

A Deep Architecture for Multimodal Summarization of Soccer Games, MMSports '19 Proceedings Proceedings of the 2nd International Workshop on Multimedia Content Analysis in Sports

## Languages

English: Native Chinese: Native

Bahasa Indonesia: Intermediate

French: Intermediate

## Skills & Technologies

Python, Scala, C (Elementary), SQL, R, Machine Learning, Deep Learning, Time Series, Natural Language Processing, Computer Vision, Linux, Git, Mac, Docker, Spark, Hadoop, Spark, Keras, Tensorflow

## Work Experience

### **Computer Vision**

#### Seervision, ETH Zurich | Feb 2020 - Ongoing

- Multiple object tracking in real-time productions (cinematography settings).
  This involves: 1) object detection, 2) pose estimation 3) person re-identification and 4) object tracking.
- Agile Product development in this startup that produces the technology and hardware for autonomous camera for live productions.

#### Research Intern

#### Team SPARKS, i3s I Nov 2018 - Jul 2019

- Re-implemented and researched on the application of Multiple Instance Neural Network (MINN) on soccer videos for action detection in Keras.
   Project results in a publication in MMSports'19 Workshop.
- Developed Multi-task Learning model with both Regression and Classification tasks for automatic summarisation of soccer videos in Keras.

#### **Junior Data Scientist**

## Go-Jek Singapore | Oct 2017 - Aug 2018

- Improved Query-Ranking model for Food search engine with Natural Language Processing (NLP) techniques in Python and Scala.
- Developed Food recommendation system with collaborative filtering, contentbased and a hybrid of the two models.
- Customer segmentation and new users insights analysis to drive user adoption rate.
- Built ETL lifecycle, model serving app and manage deployments.

#### Associate Data Scientist

## Zendesk Singapore | Apr 2017 - Oct 2017

- Zendesk AnswerBot research and developments to support multiple languages.
  Deployed to Production.
- Proofs-of-Concept (POCs) of potential of Data Science based features in Zendesk Chat product.
- Built POCs for real time chat sentiment analysis and chat tagging.
- Summarization and topic extraction from Chat dialogues.
- Research and development with the team in Melbourne.

## **Software Engineer**

#### Zendesk Singapore I Aug 2014 - Mar 2017

- Developed product features: Chat Rating, Operating Hours, and Premium Analytics reports. (node.js, Python, Django)
- Managed REST APIs for both private and public API. (Flask)
- Enhanced network protocols to support internal systems.
- Architectural improvements to the servers to support greater loads.
- Spearheaded several architectural and feature enhancements.
- Integration with main Zendesk products: cross-team and cross-country development with teams in San Francisco.

## **Projects**

## Robustness of Vehicle Re-Identification algorithms on different datasets Nov'19- Jan'20

- Analyze the robustness of the existing methods developed for VeRI dataset on unconstrained VeRI-Wild dataset.
- Analyze the underlying conditions within the two datasets that could have contributed to the robustness of the methods by extracting color, texture and semantic features.

## A Deep Architecture for Multimodal Summarization of Soccer Games

Nov'18- Feb'19

- A novel approach for automatic generation of summaries from soccer videos based on multimodal features, including audio energy, event features from sports analytics and visual information from video frames.
- Incorporation of Multiple Instance Learning to alleviate errors arising from the classification of highly homogeneous video data

## Image Retrieval Engine

Jan'19 - Feb'19

 Bag-of-Word model and R-MAC (Tolias, et al) to represent images from TRAIN VOC2007 dataset for similar image retrieval.

## Re-implementation of Profiling the End Host by Karagiannis et al.

Jan'19 - Feb'19

• Anomaly detection in IP traffic using graphlets in accordance with the paper to perform Support Vector Machine.

## Question Similarity in Community Question-Answering, SemEval-2017

Dec'18

- Question relevance classification for community question-answering forums.
- A study the impact of syntactic, semantic and thread-based features on similar questions detection.

## Education

## KTH Royal Institute of Technology (2019 - Ongoing)

Masters Degree in ICT Innovation - Data Science Specialisation in Large Scale Distributed Systems.

- EIT Digital Excellence Scholarship
- Currently conducting a research project on Vehicle Re-Identification with the new dataset published in CVPR 2019.
- Technical courses: Data-Intensive Computing (A), Data Mining and Scalable Machine Learning and Deep Learning
- Thesis: Real time Multi Object Tracking in Cinematography

## Polytech Nice Sophia Antipolis (2018 - 2019)

Masters Degree in ICT Innovation - Data Science Grade: 16/20. Mention Très Bien, Highest Honours.

- EIT Digital Excellence Scholarship
- Published a paper in MMSports'19 Workshop.
- Technical courses: Mathematical Modelling, Big Data Technologies, Data Mining for Networks, Computational Linguistics, Computer Vision, Data Valorization, Time Series, Deep Learning.

#### National University of Singapore (NUS) (2011 - 2015)

Bachelor in Science, Major in Statistics

- Participated in NUS Overseas College (NOC) local entrepreneurship programme with overseas immersion at Philadelphia and New York.
- Student Exchange Programme at Université Paris Sud XI (Orsay) in the programme Masters of Mathematical Engineering.

#### Activities

#### **Personal Pursuits**

- Diving into Robotics field knowledge
- Trying to crack "Cracking the Coding Interview"