Thanh Minh Vo

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Summary

A data scientist (in an engineering mindset) with over 2-years of work experience with a solid background in the machine learning field, especially in conceptualizing, modelling and deploying computer vision systems.

Experiences

Shopee Ltd (SEA Group) | Senior Data Scientist - Singapore **04/2019 - Present**

- **Implemented CV solutions** from scratch for KYC processes in Shopee Credit, Airpay and SeaMoney.
- Built deep learning models for **face detection, face recognition (1 vs 1 matching and 1 vs N matching)**.
- Built Shopee **in-house face detection SDK** for **mobile devices** that beat the pretrained GMS model in both speed and accuracy.
- Designed and implemented **ML services** running in SEA regions (ID, TH, PH, MY, VN) that serving more than **20M users** and more than **30 QPS**
- Built a **centralized log platform** for monitoring all services.
- Stack:
    - Model: ArcFace, Retina Face, PFLD.
    - Services: Docker, Flask, Redis, Celery, ELK,
    - Tools: Tensorflow, Pytorch, FAISS, Milvus, Pandas, Jupyter Notebook, Tmux, Crontab, Shell scripts.
    - Mobile Dev: Java (Android).

Sejong University - Imaging and Intelligent System Laboratory| Research Assistant - South Korea **03/2017 - 03/2019**

- Research topic: machine learning and deep learning in imbalanced data, bankruptcy problem, 3D face reconstruction, head pose estimation, gaze tracking.

VNG Corporation | Software Engineer - Vietnam **03/2016 - 03/2017**

- Android developer: Maintained and developed **product features** for **Zalo** chat application and **Laban key** application.
- Google Play Store: Zalo - Video Call, Laban Key
- Stack: Android, Java.

Orient Software Corporation | Software Engineer Intern - Vietnam **05/2015 - 07/2015**

- Web developer: Built Single Page App websites using MEAN Stack technology
- Stack: MongoDB, NodeJS, AngularJS, ExpressJS, ASP .NET.

Education

Sejong University | MSc in Computer Science - South Korea **03/2017 - 03/2019**

- Thesis: Reconstructing 3D Face Model from a Single 2D Image at Arbitrary Pose with Robust Morphing using Gaussian Radial Basis Function.
- GPA: 4.25/4.5

University of Science | BSc, (Hons) Advanced Program in Computer Science - Vietnam **10/2012 - 11/2016**

- Thesis: Human Activity Detection and Recognition from RGB-D Images
- GPA: 3.69/4.0

Skills

Programming Languages: Python, Java (Android), C++, Matlab.

Computer Science: Algorithms, Data Structure, Computer Vision, Machine Learning.

Deep Learning Dev: Tensorflow, Pytorch, Keras, FAISS, Milvus, Scikit-Learn, Pandas.

Database: SQL.

Languages: English (professional working proficiency). Vietnamese (native). Korean (basic)

Publication

Selected Journal Articles

- Le, C. T., **Vo, M. T**., Tung, K., Eenjun, H., Seungmin, R., Sung, W. B., ***"Multiple electric energy consumption forecasting using a cluster-based strategy for transfer learning in smart building"***, Sensors, Vol. 20(9), pp. 2668, 2020, IF: 3.03. Link
- **Vo, M. T**., Nguyen, T., Le, C. T., ***"Robust Head Pose Estimation Using Extreme Gradient Boosting Machine on Stacked Autoencoders Neural Network,"*** IEEE Access, Vol. 8, No.1, pp.3687-3694, 2020, IF: 4.09. Link
- Le, C. T, **Vo, M. T**., Vo, B., Eenjun, H., Seungmin, R., and Sung, W. B., ***"Improving electric energy consumption prediction using CNN and Bi-LSTM,"*** Applied Sciences, Vol.9 (20), 2019. IF: 2.22. Link
- Le, T, **Vo, M. T**., Vo. B., Lee. M. Y., and Sung, W. B., ***"A Hybrid Approach Using Oversampling Technique and Cost-Sensitive Learning for Bankruptcy Prediction,"*** Complexity, Vol. 2019, 2019, IF: 2.59. Link
- **Vo, M. T.**, Nguyen. T., Le. C. T., ***"A Hybrid Framework for Smile Detection in Class Imbalance Scenarios,"*** Neural Computing and Applications, pp.1-10, 2019, IF: 4.21. Link
- **Vo, M. T.** , Nguyen, T., Le, C. T., ***"Race Recognition Using Deep Convolutional Neural Networks,"*** Symmetry, Vol. 10, No, 11, pp. 564, 2018, IF: 1.25. Link
- Le, C. T., Le, H. S., **Vo, M. T.**, Lee, M. Y., and Sung, W. B., ***"A Cluster-Based Boosting Algorithm for Bankruptcy Prediction in a Highly Imbalanced Dataset,"*** Symmetry, Vol. 10, No.7, pp.250, 2018, IF: 1.25. Link

Conference Proceedings

- **Vo, M. T**. and Kong, S. G., ***"Head Pose Estimation via Manifold Learning on Global Features extraction,"*** In Proceedings of the 18th International Symposium on Advanced Intelligent Systems, Daegu, South Korea, 2017.