


# KHOA VAN TRAN

 [Github](#)   [Google Scholar](#)

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

## OVERVIEW

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- I'm student and researcher about Machine/Deep Learning at University of Engineering and Technology - Vietnam National University. My interest research topic are Optimization and Computer Vision.
- Visit my blog at <https://khoatranrb.github.io/> if you are interested about Mathematics and Machine Learning.

## EDUCATION

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**University of Engineering and Technology - Vietnam National University, Hanoi**   **Sep. 2018 – present**  
*Bachelor of Engineering in Robotics Engineering*   *Hanoi, Vietnam*

## EXPERIENCE

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### EASTGATE Software

**August 2020 – August 2021**

*AI Engineer Intern*

*Hanoi, Vietnam*

- Object Detection: Work with many Object detection models: Yolo, WPODNet, SSD, CenterNET etc.
- OCR: Collect data, build model to detect text (CRAFT, segment model, ...) and do experiment in recognize phase to improve performance of pretrained model (CRNN, Tesseract, etc).
- Image Processing: use some algorithm like Hough line transform, Feature matching, 2D discrete Fourier transform to process and analyze image.
- Information extraction: Clear and label data. Build model (Named entity recognition, Question Answering, graph computation model) to extract information of documents, invoices.

### AIGO - We make AI works

**January 2020 – March 2020**

*AI Engineer Intern*

*Hanoi, Vietnam*

- Study about Convolution Neural Network, build Deep Learning pipeline for Image classify task and build AI web app with Dash framework under the lead of [Dr. Tran Quoc Long](#).
- Use Haar Cascade on OpenCV for Face detector task.

## RESEARCH EXPERIENCE

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### UET-AI lab

**September 2019 – present**

*AI Researcher*

*Hanoi, Vietnam*

- Research under the lead of [Dr. Tran Quoc Long](#).
- Image Enhancement and Image Quality Assessment:
  - \* Implement state-of-the-art models and evaluate on benchmark datasets. Develop differentiable function to extract some special feature image.
- Chatbot:
  - \* Research about Natural Language Understanding and Dialogue System Tracking.
- Optimization and Reinforcement Learning:
  - \* Apply Optimal Control Problem to Neural Network Optimizer.

### AI Vietnam Online Lab

**February 2020 – December 2020**

*AI Researcher*

*Hanoi, Vietnam*

- Research under the lead of Dr. Dinh Quang Vinh.
- Research topics:
  - \* Image Enhancement
  - \* Research about multi-class representation and one-class representation.
- Research results:
  - \* A paper has accepted at The 9th International Conference on Smart Media and Applications (SMA 2020).

## RESEARCH PUBLICATIONS

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- **End-to-end Deep Network for Image Denoising and Colorization.**

*Khoa Tran Van*, Vinh Dinh Quang, Phuc Nguyen Hong, Narayan Debnath C, Tuan-Duc Nguyen, Chang Wook Ahn.  
The 9th International Conference on Smart Media and Applications (SMA 2020).

## SKILLS

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### Knowledge base:

- Mathematics: Statistics, Linear Algebra.
- Computer Vision: Object detection, OCR, GAN, etc.
- Natural Language Processing: Named entity recognition, Question Answering, Machine translation, etc.

### Programming:

- Python: Tensorflow, Pytorch, etc.
- C/C++.