

# NGUYEN VAN QUANG

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## EDUCATION

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1. **Tohoku University, Japan** Oct 2019 - Present  
PhD Student in Computer Vision Lab Prof. Takayuki Okatani
2. **Tohoku University, Japan** Sep 2017 - Sep 2019  
Master's Degree in Information Science, Master's [Thesis](#) GPA: 4.0/4.0
3. **University of Engineering and Technology, Vietnam** Sep 2012 - Aug 2017  
Bachelor's Degree in Computer Science, Bachelor's [Thesis](#) GPA: 3.9/4.0
4. **Daejeon University, South Korea** Sep 2015 - Aug 2016  
Exchange Student in Fostering ASEAN Future Leaders Program GPA: 4.4/4.5
5. **High School for Gifted Students, Vietnam National University** Aug 2009 - Jun 2012  
Major in Chemistry, First Prize of National Chemistry Olympiad 2012

## TECHNICAL SKILLS

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Programming Languages	Python, Java, C/C++, Swift
Familiar Operating Systems	Mac OS, Ubuntu, and Windows
Machine Learning Frameworks	Pytorch, Tensorflow, Keras, pandas, numpy
Software Development Experiences	Android, iOS Application, and Web Development

## WORK AND RESEARCH EXPERIENCES

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**Research Graduate Student** Sep 2017 - Now  
*Tohoku University - supervised by Prof. Takayuki Okatani, Prof. Tokuyama*

- **Visual Dialog:** The current work focuses on building a system which can answer a question based on the image and dialog history provided. We proposed an efficient attention mechanism for multiple inputs in Visual Dialog to improve the performance to the SOTA on [the task](#).
- **Micro-expression Recognition:** Using CapsuleNet and various CNN models for Micro-expression Recognition. The work was accepted in FG 2019 with available [\[Code\]](#), [\[Pdf\]](#).
- **Micro-expression Spotting:** Using the 3D-CNN model to detect and spot the period of micro-expressions from videos with available [\[Code\]](#).

**Machine Learning Research Intern** Mar 2018 - Sep 2018  
*Laboro.AI Inc. - supervised by Dr. Hiromasa Fujihara*

- **Face Detection:** The main focus is to detect the hard faces including small, occluded faces from images. The work was accepted in FG 2019 with available [\[Project Web\]](#), [\[Code\]](#), [\[Pdf\]](#).
- **Object Recognition:** My responsibility to write the Keras scripts for training ResNet101 on ImageNet from scratch (There was no such implementation available on the Internet). The training procedure took 2 weeks to converge with approximately same results ( $\pm 0.4\%$ ) as public pretrained versions on Tensorflow, Pytorch and so on. The company code is closed to public.

## Machine Learning Research Intern

Jul 2016 - Aug 2016

*Software Engineer Incubation Center, Fujitsu Japan*

- **Research Project:** Building a system for question answering. I was responsible for investigating and prototyping a deep learning model using LSTM blocks to build a system for question answering.

## Research Bachelor Student

Jun 2016 - Jun 2017

*Data Science Laboratory - supervised by Assoc.Prof. Quang-Thuy Ha*

- **Research Topics:** Various machine learning algorithms for NLP and medical field.
- **Text classification:** I was working on several models for multi-label text classification. Together with other researchers, we published several papers to the conferences and journal.
- **e-Doctor Big Data Project:** I was responsible for preprocessing more than 1 million medical records from patients taking medical test in Vietnam.
- **Thesis** titled “An algorithm adaptation multi-label classification method and experiments on Vietnamese text” was awarded as the best thesis of the year. The electronic version can be found [here](#).

## Web Development Intern

Jan 2016 - Mar 2016

*United Nations Asia Pacific Center for ICT Development, South Korea*

- **Work Project:** Front-end development for e-learning [website](#).

## PUBLICATIONS

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1. Efficient Attention Mechanism for Handling All the Interactions between Many Inputs with Application to Visual Dialog  
Arxiv 2019  
**Nguyen Van Quang**, Masanori Suganuma, Takayuki Okatani [\[Pdf\]](#)
2. CapsuleNet for Micro-Expression Recognition Automatic Face and Gesture Recognition 2019, France  
**Nguyen Van Quang**, Jinhee Chun, Takeshi Tokuyama [\[Code\]](#)[\[Pdf\]](#)
3. Revisiting a single-stage method for face detection Automatic Face and Gesture Recognition 2019, France  
**Nguyen Van Quang**, Hiromasa Fujihara [\[Project Web\]](#)[\[Code\]](#)[\[Pdf\]](#)
4. A New Lifelong Topic Modeling Method and Its Application to Vietnamese Text Multi-label Classification  
In proceedings of ACIIDS 2018, LNAI 10751  
Quang-Thuy Ha, Thi-Ngan Pham, **Van-Quang Nguyen**, Thi-Cham Nguyen, Thi-Hong Vuong, Minh-Tuoi Tran, Tri-Thanh Nguyen [\[Pdf\]](#)
5. A New Text Semi-supervised Multi-label Learning Model Based on Using the Label-Feature Relations  
In proceedings of ICCCI 2018, LNAI 11055, UK  
Quang-Thuy Ha, Thi-Ngan Pham, **Van-Quang Nguyen**, Minh-Chau Nguyen, Thanh-Huyen Pham, Tri-Thanh Nguyen [\[Pdf\]](#)
6. A semi-supervised multi-label classification framework with feature reduction and enrichment  
In Journal of Information Tecommunication, 2018, UK  
Thi-Ngan Pham, **Van-Quang Nguyen**, Van-Hien Tran, Tri-Thanh Nguyen, Quang-Thuy Ha [\[Pdf\]](#)
7. MASS: A Semi-supervised Multi-label Classification Algorithm with Specific Features  
In proceedings of ACIIDS 2017, Studies in Computational Intelligence 710, Japan  
Thi-Ngan Pham, **Van-Quang Nguyen**, Tri-Thanh Nguyen, Quang-Thuy Ha [\[Code\]](#)[\[Pdf\]](#)

8. Social-spam Profile Detection based on Content Classification and User Behavior In Information Security Conference 2016, Vietnam  
Thi-Hong Vuong, Van-Hien Tran, **Van-Quang Nguyen**, Minh-Duc Nguyen, Cam-Van Thi Nguyen, Thanh-Huyen Pham, Mai-Vu Tran

## SCHOLARSHIPS AND AWARDS

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|---|-------------|
| 1. Japanese Government Scholarship (MEXT) for PhD Course                          | 2019 - 2022 |
| 2. Japanese Government Scholarship (MEXT) for Master Course                       | 2017 - 2019 |
| 3. Data Science Summer School Scholarship, Gottingen University                   | 2018        |
| 4. Honda Young Engineer Scientist Award for 10 most excellent students in Vietnam | 2017        |
| 5. Third Prize of National Scientific Student Research Conference                 | 2017        |
| 6. Excellent Thesis Award - Best undergraduate thesis (scored 10/10)              | 2017        |
| 7. First Prize of Scientific Student Research Conference                          | 2017        |
| 8. Excellent Student Award - The valedictorian of QH-2012 batch                   | 2017        |
| 9. AmCham Scholarship - from American Chamber and the US Embassy                  | 2017        |
| 10. Machine Learning Summer School Scholarship, Kyoto University                  | 2016        |
| 11. Merit-based University Scholarships, UET-VNU                                  | 2013 - 2017 |
| 12. Shinnyo-en Scholarships, awarded in 4 consecutive years                       | 2012 - 2016 |
| 13. Hoa Trang Nguyen Award, awarded to only 2 recipients from UET-VNU             | 2012        |
| 14. The second highest score in University Entrance Examination                   | 2012        |
| 15. First Prize in National Chemistry Olympiad 2012                               | 2012        |
| 16. Merit-based New South Wale University Scholarship, Australia                  | 2012        |
| 17. Telecom Corporation Scholarship   | 2012        |
| 18. Odon Vallet Scholarship, France   | 2011        |
| 19. Third Prize in National Chemistry Olympiad 2011                               | 2011        |

## OTHER INFORMATION

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Teaching Assistant	Data Science, Big Data Challenge Camps
Languages	English (Advanced) and Japanese (Beginner)
Hobbies	Photography, Running, Table tennis, and Football
Tools	Latex, Adobe, Microsoft Office, Javascript, HTML, CSS.

## REFERENCES

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|-------------------------------|---------------------|---------------------------------------|
| 1. Prof. Takayuki Okatani     | PhD Supervisor      | Email: okatani@vision.is.tohoku.ac.jp |
| 1. Prof. Takeshi Tokuyama     | Master Supervisor   | Email: tokuyama@dais.is.tohoku.ac.jp  |
| 2. Doctor Hiromasa Fujihara   | Intern Supervisor   | Email: fujihara@laboro.ai             |
| 3. Assoc. Prof. Ha Quang Thuy | Bachelor Supervisor | Email: thuyhq@vnu.edu.vn              |