



# Nguyen Van Thieu

## Curriculum Vitae

### Current Addr

Cau Giay, Hanoi,  
Vietnam

### Email

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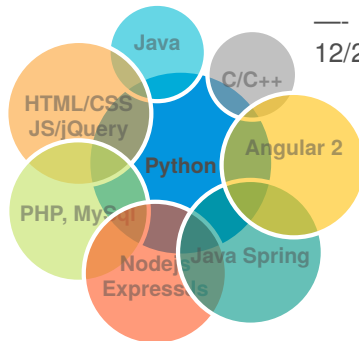
### Websites

Google Scholar  
Researchgate  
ORCID  
Linkedin  
Blog

### Coding Store

github  
bitbucket  
gitlab

### Programming



## Education

- 10/2018 **Hanoi University of Science and Technology (HUST), Hanoi, Vietnam**  
— School of Information and Communication Technology
- 04/2021  
• Master in Computer Science, GPA: 3.72/4 (9/10)  
• Thesis: Time series analysis for forecasting problem
- 09/2019 **University of Luxembourg (UL), Luxembourg**  
— Faculty of Science, Technology and Medicine (FSTM)
- 02/2020  
• Master in Information and Computer Science  
• Exchange program based on framework of Erasmus+2020 scholarship.
- 08/2013 **Hanoi University of Science and Technology (HUST), Hanoi, Vietnam**  
— School of Information and Communication Technology
- 08/2018  
• ICT Talented Engineer Program, GPA: 3.03/4 (7.5/10)  
• Thesis: Building a self-organizing neural network for forecasting future cloud resources consumption

## Research Experience

- 03/2020 **Artificial Intelligence Independent Research Group (AIIR Group), VN** [Lab](#)  
— Co-founder (5 initiate members) - [Link](#)
- Now  
• Working as an independent researchers in spare time.  
• Main works: Applied artificial intelligence to solve optimization problems (both academic and industry)  
• Current domains: engineering (groundwater management, streamflow prediction), UAVs, WSN, 5G, cloud computing...

- 08/2017 **High Performance Computing Center (HPCC - HUST), Vietnam** [Lab](#)  
— Researcher
- 12/2021  
Leader of AI Research Team includes 5 members.

### Machine Learning and Deep Learning - ML & DL

- Based on historical time series data, build a model to forecast the number of requests to the 1998 World Cup website
- Predicting Google cluster trace time series data.

### Artificial Intelligence and Computational Intelligence (AI & CI)

- Design improved time-series forecasting model based on Neural Network (Self-Structure NNs, Functional Link NNs, ELM, MLP, SONIA,...) and CI (Swarm Optimization, Human-inspired Optimization,...)

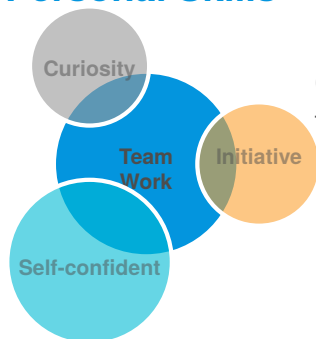
### Auto-scaling resources usage mechanism in a cloud server center

- Design Decision-making modules based on QoS and SLA in the server.
- Design auto-scaling system using Forecasting Model and Decision-making modules above to decide turning servers off or on to optimize energy consumption in the cloud server.

## OS Preference

Windows ★★★★★  
GNU/Linux ★★★★★

## Personal Skills



03/2020

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09/2020

**Fukuda Laboratory, National Institute of Informatics (NII), Japan**

[Lab](#)

Researcher Assistant (Mentor: Prof. Kensuke Fukuda)

- System Log Template Estimation With Deep Transfer Learning
- Working with some data-driven methods for system log template estimation (description and variable) such as AEL (heuristics), Drain (parsing tree), CRF (NLP), Nulog (neural network)...
- Design a deep transfer learning model (DTNN - NLP) based on extension of CRF, semantic with word-level and character-level in NLP, transfer learning based on deep neural network

09/2019

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02/2020

**Parallel Computing and Optimization Group (PCOG), Luxembourg**

[Lab](#)

Researcher Assistant (Mentor: Dr. Daniel H. Stolfi)

- Meta-heuristics and Its Application
- Applying bio-inspired algorithms and meta-heuristic algorithms in combinatorial optimization, robotics, and computer simulations.
- Optimizing swarm of UAVs in path planning using CoppeliaSim Simulator.

## Awards/ Certificates

04/2021

**Achieved the highest score in a Master Defense Council at HUST**

[Master](#)

[Thesis](#)

## Languages

Vietnam ★★★★★  
English ★★★★★

02/2020

**Achieved NII International Internship Program for International Exchange Student to National Institute of Informatics, Japan**

[Scholarship](#)

[Certificate Link](#)

07/2019

**Achieved Erasmus+ scholarship for International Exchange Student to University of Luxembourg**

[Scholarship](#)

[Certificate Link](#)

## Places Lived



05/2019

**TOEIC 755, (Listening: 390, Reading: 365)**

[TOEIC](#)

[Certificate Link](#)

04/2019

**Being awarded as The Winner in Master Program challenge in Data Science at HUST**

[Challenge](#)

[Certificate Link](#)

06/2018

**Achieved the highest score in a Graduation Defense Council at SoICT-HUST**

[Graduation Thesis](#)

## Research Interests

- **Artificial Intelligence:** Machine Learning, Neural Network, Supervised Learning, Un-supervised Learning, Reinforcement Learning And Deep Learning.
- **Soft Computing:** Meta-heuristic Algorithm, Computational Intelligence, Bio-inspired Optimization, And Global Optimization.
- **Real-World Application:** Cloud Management, Auto-Scaling System, Inflow And Rain-fall Application, WSNs, UAVs, 5G Network, ...

## Publications

- 09/2021 **Multi-objective Sparrow Search Optimization for Task Scheduling in Fog-Cloud-Blockchain Systems.** [Conf.](#)  
 Nguyen, Thieu; Nguyen, T.; Vu, Quoc Hien; Huynh, T. T. B.; and Nguyen, B. M. In proceeding of, IEEE Computer Society, International Conference on Services Computing (IEEE SCC 2021), Virtual Conference. Link: DOI
- 07/2021 **Predicting roof displacement of roadways in underground coal mines using adaptive neuro-fuzzy inference system optimized by various physics-based optimization algorithms.** [Journal](#)  
 Xie, Chengyu, Hoang Nguyen, Xuan-Nam Bui, Van-Thieu Nguyen, and Jian Zhou. Journal of Rock Mechanics and Geotechnical Engineering (2021). Link: DOI
- 03/2021 **A comprehensive comparison of recent developed meta-heuristic algorithms for streamflow time series forecasting problem.** [Conf.](#)  
 Ahmed, Ali Najah, To Van Lam, Nguyen Duy Hung, Nguyen Van Thieu, Ozgur Kisi, and Ahmed El-Shafie. Applied Soft Computing 105 (2021): 107282. Link: DOI
- 03/2021 **MPoC-A Metaheuristic Proof of Criteria Consensus Protocol for Blockchain Network.** [Conf.](#)  
 Nguyen, B. M., Nguyen, T., Nguyen, Thieu, and Do, B. L. In 2021 IEEE International Conference on Blockchain and Cryptocurrency (ICBC), pp. 1-8. IEEE, 2021. Link: DOI
- 02/2021 **LogDTL: Network Log Template Generation with Deep Transfer Learning.** [Conf.](#)  
 Nguyen, Thieu, Satoru Kobayashi, and Kensuke Fukuda. In 2021 IFIP/IEEE International Symposium on Integrated Network Management (IM), pp. 848-853. IEEE, 2021. Link: DOI
- 01/2021 **nQSV-Net: a novel queuing search variant for global space search and workload modeling.** [Journal](#)  
 Nguyen, B. M.; Hoang, Bao; Nguyen, Thieu; and Nguyen, G. Journal of Ambient Intelligence and Humanized Computing 12, no. 1 (2021): 27-46. Link: DOI
- 06/2020 **EO-CNN: An Enhanced CNN Model Trained by Equilibrium Optimization for Traffic Transportation Prediction.** [Conf.](#)  
 Nguyen, Thieu; Nguyen, G.; and Nguyen, B. M. "Procedia Computer Science 176 (2020): 800-809. Link: DOI
- 04/2020 **Hybridization of Galactic Swarm and Evolution Whale Optimization for Global Search Problem.** [Journal](#)  
 Nguyen, B. M., Tran, T., Nguyen, Thieu, & Nguyen, G. (2020).. IEEE Access, 8, 74991-75010. Link: DOI
- 03/2020 **A New Workload Prediction Model Using Extreme Learning Machine and Enhanced Tug of War optimization.** [Conf.](#)  
 Nguyen, Thieu, Hoang, B., Nguyen, G., & Nguyen, B. M. (2020). Procedia Computer Science, 170, 362-369. Link: DOI
- 09/2019 **Efficient Time-Series Forecasting Using Neural Network and Opposition-Based Coral Reefs Optimization.** [Journal](#)  
 Nguyen, Thieu, Nguyen, T., Nguyen, B. M., & Nguyen, G. (2019). International Journal of Computational Intelligence Systems, 12(2), 1144-1161. Link: DOI
- 04/2019 **Building Resource Auto-scaler with Functional-Link Neural Network and Adaptive Bacterial Foraging Optimization.** [Conf.](#)  
 Nguyen, Thieu, Nguyen B.M., Nguyen G. (2019) In Theory and Applications of Models of Computation. TAMC 2019. Lecture Notes in Computer Science, vol 11436. Springer, Cham. Link: DOI
- 10/2018 **A resource usage prediction system using functional-link and genetic algorithm neural network for multivariate cloud metrics.** [Conf.](#)  
 Nguyen, Thieu, Tran, N., Nguyen, B. M., & Nguyen, G. (2018). In 2018 IEEE 11th conference on service-oriented computing and applications (SOCA) (pp. 49-56). IEEE. Link: DOI

## References

**Prof. Fukuda Kensuke**

*National Institute of Informatics, Japan  
Department of Informatics, Graduate University for Advanced Studies (SOKENDAI), Japan*

- Website: [Link](#)

**Prof. Ahmed El-Shafiee**

*Civil Engineering Department, Faculty of Engineering,  
University of Malaya, Kuala Lumpur, Malaysia  
National Water Center, United Arab Emirates University,  
Al Ain P.O. Box 15551, United Arab Emirates*

- Website: [Link](#)

**Prof. Seyedali Mirjalili**

*Centre for Artificial Intelligence Research and Optimization,  
Torrens University Australia, Australia*

- Website: [Link](#)

**Assoc. Prof. Ozgur Kisi**

*Civil Engineering Department, University of Applied Sciences,  
Lübeck, Germany*

- Website: [Link](#)

**Dr. Ali Najah Ahmeda**

*Institute of Energy Infrastructure (IEI), Civil Engineering  
Department, College of Engineering, Universiti Tenaga  
Nasional (UNITEN), Selangor, Malaysia*

- Website: [Link](#)

**Dr. Hoang Nguyen**

*Mining Faculty, Hanoi University of Mining and Geology,  
Hanoi, Viet Nam*

- Website: [Link](#)

**Dr. Binh Minh Nguyen**

*School of Information and Communication Technology,  
Ha Noi University of Science and Technology, Ha Noi,  
Viet Nam.*

**Dr. Giang Nguyen**

*Institute of Informatics, Slovak Academy of Sciences,  
Bratislava, Slovakia.*

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June 18<sup>th</sup>, 2022