

## EDUCATION

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**Oregon State University** Corvallis, United States  
Doctor of Philosophy, Electrical & Computer Engineering 2022-2027

- **Current GPA:** 3.98/4 – Qualifying exam (Masters equivalent) completed in Spring 2024.
- **Focus area:** Information theory, Statistical learning, Optimization, Stochastic processes

**HCM Bach Khoa University (HCMUT)** Ho Chi Minh City, Vietnam  
Bachelor of Electrical Engineering 2013-2017

- **GPA:** 8.92 / 10 – **Departmental rank (Class of 2013):** 1 / 650
- **Relevant Courseworks:** Linear Algebra, Probability and Applications, Numerical Methods, Computer Engineering 1, Microcomputer Lab, Computer System Engineering, Digital Signal Processing, Communication Systems 1

## WORK EXPERIENCES

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**VNG Corporation – Data & Analytics Lab** Ho Chi Minh City, Vietnam  
*Senior Machine Learning Engineer* Feb 2020 – Feb 2022

- Developer of <https://trueid.ai/> (modeling and backend services)
- DL/ML modeling (computer vision) and production deployment with Tensorflow, TensorRT
- Packaging APIs via REST and gRPC
- Hands-on experiences with Rancher, Kubernetes, Docker, Ubuntu Server with multiple Nvidia GPUs setup
- Fail-over system design using NATS, MySQL and k8s
- Languages: Python, Golang, C/C++ (occasional), Javascript (occasional). ML & Data analysis framework: Spark, Pandas, Scikit-learn, Tensorflow

**Trusting Social** Ho Chi Minh City, Vietnam  
*Research Engineer* Nov 2018 – Jan 2020

- Credit scoring using telecom data: big data computing with PySpark, machine learning modelling with SparkML, scikit-learn and xgboost
- Age estimation from in-the-wild photos with heavy noises: transfer learning from SOTA networks (ResNet, InceptionNet, ...) with modified loss function and heavy pre-/post-processing techniques. Built using MXNet and Tensorflow with Python API. Experience with setting up FP16 Tensorflow code to maximize performance gain from latest Nvidia GPU (training time).

**Knorex** Ho Chi Minh City, Vietnam  
*Associate Data Scientist* Mar – Nov, 2018

- Conversion rate estimation using SparkML
- Click-through rate estimation with Scikit-learn and Tensorflow on GCP
- Multi-armed bandits framework for efficient ads placement (built with Python and Tornado web server)

**Intel Products Vietnam** Ho Chi Minh City, Vietnam  
*Product Development Engineer (PDE) Intern* 2017

- Support on yield and failure rate analysis: using in-house proprietary SQL-based tool to perform statistical analysis of failed CPU dies

**Ho Chi Minh City University of Technology** Ho Chi Minh City, Vietnam  
*Teaching Assistant* 2016

- TA for ECE120, ECE198JL, which are introductory courses for Computer Architecture.

*Senior Project* 2017

- Performance analysis of Information security in cognitive radio networks under primary interference and artificial noise.

## RESEARCH INTERESTS and PUBLICATIONS

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- **An Vuong**, Anthony Nguyen, Thinh Nguyen. “Active Data Acquisition - An Information Theoretic Approach”. 2025 Workshop on Computing, Networking and Communications (ICNC’25)
- **An Vuong**, Thinh Nguyen. “Perception-based multiplicative noise removal using SDEs”. Preprint, under review 2024. arXiv [2408.10283](https://arxiv.org/abs/2408.10283)
- Nam Nguyen, **An Vuong**, Thuan Nguyen, Thinh Nguyen. “On Minimizing Symbol Error Probability for Antipodal Beamforming in MIMO Gaussian Wiretap Channels”. IEEE 100<sup>th</sup> Vehicular Technology Conference, Fall 2024.
- **An Vuong**, Thuan Nguyen, Thinh Nguyen. “Capacity achieving quantizer design for multiple-input multiple-output thresholding channels.” IEEE 97<sup>th</sup> Vehicular Technology Conference, Spring 2023.
- Khuong H.V, Trong N.D, **An V.B.** “On information securing capability of cognitive radio networks under primary interference and artificial noise.” International Conference on System Science and Engineering, 2017.

My working interests were designing and building distributed systems for serving AI/ML models at scale. Current at Oregon State University, I’m working on information theoretic bounds in discrete memory-less channels, graph signal processing, diffusion processes, and some flavors of reinforcement learning.

## HONORS & AWARDS

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- First rank honor – Gold medal HCMC, 2017  
by Bach Khoa University.
- AmCham Scholarship HCMC, 2016  
by American Chamber of Commerce in Vietnam
- Japan-Asia Youth Exchange program in Science Scholarship Japan, 2015  
by Japan Science and Technology Agency.
- Toyohashi International Student Program Scholarship Japan, 2015  
by Toyohashi University of Technology.
- Excellent Students Scholarship 2013-2016  
Granted 6 times consecutively by the Office for International Study Programs (OISP),  
Ho Chi Minh University of Technology for being top 1 in class.

## SKILLS & CERTIFICATIONS

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**Technical Skills:** Appropriate command of git, Matlab, Python, C/C++, Pytorch, Tensorflow. Robust understanding of deep learning architectures (DNN, CNN, RNN/LSTM, Transformers) and traditional machine learning algorithms (Decision tree/Random forest, SVM/Kernel SVM, k-NN and k-Means). Theoretical knowledge of convex optimization techniques, estimation theory, stochastic & diffusion processes, and statistical learning.

### Certifications & Training:

- [Deep Learning, a 5-course specialization by deeplearning.ai on Coursera](https://www.coursera.org/specializations/deep-learning) 2018
- [Machine learning Python track on Datacamp](https://www.datacamp.com/certification/machine-learning-python) 2018

## REFERENCES

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- Prof. Thinh Nguyen, PhD  
Oregon State University  
EECS Department  
PhD Major advisor  
[thinhq@eeecs.oregonstate.edu](mailto:thinhq@eeecs.oregonstate.edu)
- Mr. Nghi Duong, MSc  
VNG Corp, Data & Analytics Lab  
Lead Data Scientist  
Former direct manager at VNG  
[nghida@vng.com.vn](mailto:nghida@vng.com.vn)
- Mr. Thai Dinh, MSc  
Paymaya, Head of Data & AI  
Former direct manager at Trusting Social  
[thai.dinh@paymaya.com](mailto:thai.dinh@paymaya.com)
- Dr. Yiping Jin,  
Knorex Thailand/Singapore  
Senior Research Scientist  
Former direct manager at Knorex  
<https://www.linkedin.com/in/yiping-jin/>