HoangNguyen

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My ultimate goal is to become a professor because I enjoy learning and teaching. My main interest is theoretical machine learning, especially graphical models, submodularity, and random processes on graphs.

EDUCATION

2015-2017 *(expected)* — **Tokyo Institute of Technology** - *M.Eng., Teaching Assistant* — Tokyo, Japan

My major is Computer Science at the School of Computing. My main topic is Complex Network. My study is funded by the Japanese Government.

`[Python, Theoretical Machine Learning, Complex Networks]`

2009-2014 — **Hanoi University of Science and Technology** - *B.E., Research Assistant* — Hanoi, Vietnam

I majored in Computer Engineering and Telecommunication in a 5 years engineering program. I worked on VLSI design and FPGA technology with associate professor Pham Ngoc Nam. My group designed a Mesh Network on Chip on FPGA.

`[VHDL, Verilog, C++, Embedded Systems, FPGA]`

AWARDS

2015-2017 — **Japanese Government Scholarships (MEXT)** - *Master Studies* — Tokyo, Japan

Also known as "Monbukagakusho", MEXT scholarship is awarded to excellence foreign students to pursue higher degrees in Japan.

2006-2009 — **Studies Scholarships** - *High School For Gifted Students* — Hanoi, Vietnam

Studies scholarship is awarded yearly by Hanoi National University of Education to excellence students of its High School for Gifted Students.

PROFESSIONAL AND RESEARCH EXPERIENCE

August 2016 — **ICDM 2016** - *Reviewer* — Tokyo, Japan

I reviewed two papers for ICDM 2016.

May 2016 — **NetSci 2016** - *Presenter* — Seoul, Korea

I presented our project idea about brain network construction from EEG data in a satellite talk. More detail can be found at gear.github.io/bnet.

2015-now — **Murata Laboratory** - *Master Student* — Tokyo, Japan

I work on graph embedding and random processes on graphs. I designed the algorithm named MAGE, which uses motifs to transverse a graph in order to generate high quality graph context. I also work as a teaching assistant for professor Tsuyoshi Murata in two courses: Machine Learning and Complex Network.

Summer 2015 — **Donuts Hanoi Co. Ltd** - *Software Developer* — Hanoi, Vietnam

I implemented bonus game scene, ranking board, and multimedia newsletter for the game named "Gachinko no Tora". The game can be found at gachitora.jp.

2012-2015 — **ESRC Laboratory** - *Research Assistant, General Manager* — Hanoi, Vietnam

I received intensive training in Embedded System design, especially on FPGA technology. My main focus was reconfigurable Network on Chip architecture. More detail can be found at gear.github.io/noc.

TEACHING EXPERIENCE

Spring 2016 — **Machine Learning** - *Teaching Assistant* — Tokyo, Japan

I was in charge of making assignments and tutorials on using WEKA data mining tool. I am also designing a 4-weeks specialized course on Deep Learning.

2014-2015 — **IGCSE/IB Exam Prep** - *Tutor* — Hanoi, Vietnam

I worked as a tutor for secondary and high school students at Hanoi International School. I helped the students on their IGCSE science project, IB Advanced IT projects, and IB Advanced Physics exam preparation.

RELATED COURSEWORK

Tokyo Institute of Technology - *Master Course* — Tokyo, Japan

Machine Learning, Complex Networks, Advanced Inverse Problems, Distributed Algorithms, Advanced Databases, High-performance Computing, Human-Centered Informatics Exercise, Fundamental Mathematics for Computer Science.

Hanoi University of Science and Technology - *Undergraduate Course* — Hanoi, Vietnam

Calculus I-II-III, Algebra, Electromagnetism, Computer Architecture, VLSI Design, Algorithms and Data Structure, Software Development.

MAJOR PROJECTS

Summer 2016 — **Motif-Aware Graph Embedding (MAGE)** — Tokyo, Japan

MAGE is an algorithm to generate graph context as it uses graph motifs to guide the random walks. Our idea is novel and recognized by other researchers. The paper and project details can be found at gear.github.io/mage.

Winter 2015 — **INFECTION - An Augmented Reality Game** — Tokyo, Japan

We build from scratch a ball game in which player throw a physical digital ball at a projected screen to stop viruses from spreading in a network.

LANGUAGES

Vietnamese *native*
English *fluent (iBT: 103)*
Japanese *basic*

PROGRAMMING

Python, C++, BashScript
Java, Javascript, HTML/CSS
Haskell, Scala, Coq

FRAMEWORKS

SNAP, NetworkX, Tensorflow
Ocelot, Neko, Sklearn
Cocos2dx, Cocoa