

Thinh Nguyen-Vo

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EDUCATION

Master of Science, IAT Simon Fraser University, CA

Coursework: Artificial Intelligence (A-), Quantitative Research Methods (A+), Knowledge Visualization (A), and Writing for Publication (A)

Bachelor of Science, CS VNUHCM University of Science, VN

Coursework: Machine Learning (A+), Computer Vision (A+), Algorithms & Complexity (A+), Linear Algebra (A), and Applied Statistics (A+)

Data Science Professional Certificate IBM on Coursera

9-course specialization: Data Science Methodologies, Python for Data Science, Databases and SQL, etc., illustrated in IBM Cloud (Watson)

Algorithms Stanford on Coursera

4-course specialization: Sorting and Searching, Graph Search, Greedy Algorithms, Dynamic Programming, NP-Complete, etc.

EXPERIENCE

Teaching Assistant Simon Fraser University

- Teach OOP, Data Structure, Searching Algorithms, and Design Patterns; illustrating with programming tutorials in Java (Swing)
- Demonstrate common research methods in HCI, e.g., heuristic evaluation, cognitive walkthrough, contextual inquiry, etc.; and facilitate students in developing final projects

Research Assistant iSPACE Research Laboratory

- Develop VR simulations to collect user behavioral data in experimentation, among which is used on NASA ISS
- Conduct mixed-method experiments with human subjects
- Analyze quantitative data and compile scientific reports

Research Assistant Polytechnique Montréal

- Develop vision-based tracking system for pedestrian tracking in public
- Evaluate state-of-the-art models with real and massive data

ACHIEVEMENTS

Programming

- 2nd Prizes of ACM/ICPC Vietnam National Rounds in 2 years
- 2nd Prize of Vietnam National IT Olympiad 2012

Research

- 1 full paper, 2 short papers, 2 extended abstracts, and 5 posters
- 13 citations – h-index = 3 <https://i.thinh.ca/gscholar>

Scholarships

- Mitacs Fellowship for returning Globalink Alumni
- SFU merit-based Graduate Fellowship
- VNUHCM US merit-based scholarships for Top 3 highest GPA

TECHNICAL SKILLS

Programming

- Proficient in Python, Java, C#, and MATLAB
- Experienced with C++, HTML, Shell, Git

Data Analysis

- Familiar with visualization tools/libraries (Tableau, Matplotlib)
- Experienced in statistical analysis (SAS jmp, IBM SPSS, SciPy)

Data Science / Machine Learning / Deep Learning

- Experienced with applying machine learning models/algorithms in Computer Vision (Python, scikit-learn, PyTorch, MATLAB, C++, Caffe)
- Familiar with Neural Networks (particularly ConvNet) in image recognition and classification problems

FEATURED PROJECTS

Efficiently Navigating Virtual Environments

#VirtualReality #HumanComputerInteraction #VRMotionSickness

- Propose using motion cues from body-based sensory systems to help users reduce motion sickness and improve spatial orientation
- Series of studies (MSc thesis); results published at:
IEEE VR 2018 <https://doi.org/10.1109/VR.2018.8446383>
Spatial Cognition 2018 <https://osf.io/bs5ug/>
IEEE 3DUI 2017 <https://doi.org/10.1109/3DUI.2017.7893344>

EEG-Based Orientation Demand Detector

#CNN #NeuralNetwork #MachineLearning #VR

- Propose to apply convolutional neural network (CNN) on electroencephalogram (EEG) signal from human brain to predict user's orientation demand (difficulties in reorientation)
- Results showed 96% accuracy with a 4-layer CNN, published at ACM SAVR 2017 workshop <http://summit.sfu.ca/item/18170>

Smart Teddy Bear: A Vision-based Story Teller

#MachineLearning #SupportVectorMachine #KMeans

- Propose a Smart Teddy Bear that can recognize comic book covers and tell the corresponding stories. Kids might play with the bear by simply waving a book to it.
- Results achieved 99.33% accuracy in book recognition; published at ICCAIS 2013 <https://doi.org/10.1109/ICCAIS.2013.6720564>

Relocation to Toronto? Finding a Similar Neighborhood

#MachineLearning #KMeans #FourSquareAPI #DBSCAN

- Explore neighborhoods in downtown Toronto with FourSquare APIs
- Apply unsupervised learning algorithms (e.g., KMeans and DBSCAN) to categorize neighborhoods into different clusters and find the most similar neighborhoods compared with one's hometown.
- Side project; published as a blog post <https://i.thinh.ca/relocate2yyz>
with Jupyter notebook available <https://i.thinh.ca/relocationNB>