HIEU Q. NGUYEN

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EDUCATION

University of Connecticut *August 2019 - present*
Ph.D. in Computer Science.

Michigan State University *August 2018 - transfer*
Ph.D. in Computer Science.

Western Connecticut State University *August 2014 - May 2018*
M.A. Mathematics. Overall GPA: 3.76/4.00
B.A. Mathematics — Minor in Economics. Overall GPA: 3.97/4.00
Member of Kathwari Honors Program

TECHNICAL STRENGTHS

Languages and Platforms Python, Matlab, R, Pytorch, Keras/Tensorflow
Software & Tools MS Office, Minitab, LATEX

RESEARCH EXPERIENCE

Super-resolution based Convolution Neural Networks
Given a low resolution image or video input, the project aims to reconstruct a higher quality result using residual and generative neural networks.

Stock Forecasting using Recurrent based LSTM Networks
Denoising history stock data using wavelet transformation and predict future stock price using support vector machine and LSTM models.

Price Optimization on Nonlinear Demand Functions
Utilizing pricing data of comparative goods, the project aims to model the demand functions to maximize profit for both manufacturers and retailers. Use of Lagrange Multipliers on the non-linear demand functions.

Steganography on M-band Wavelet Domain Use wavelet to breakdown image's frequency signals and embed secret information into the approximation portion using pseudo quantum encryption method.

RELATED COURSEWORK

Mathematics
Linear Algebra — Multivariate Calculus — Differential Equations — Applied Mathematics — Statistical Inferences — Applied Statistics — Mathematical Modelling — Complex Analysis — Real Analysis — Abstract Algebra

Computer Science
Advanced Networking System — Advanced Data Structures and Algorithms — Machine Learning — Bioinformatics — Data Mining

Finance, Economics
Microeconomics — Macroeconomics — Growth Economics — Financial Programming and Modelling — Financial Data Mining and Big Data Analytics — Financial Mathematics

WORK EXPERIENCE

University of Connecticut, CT August 2019-present
Graduate Assistant

· Research on applications of Machine Learning on micro and macro economics data.

Michigan State University, MI August 2018-August 2019
Graduate Assistant

· Research on computer vision tasks include object detection and image super-resolution using deep learning methods.
· Grade homework assignments and exams for undergraduate discrete math course. Hold office hours and provide additional instructions to students.

RabbitPre Intelligent Technology, China Summer 2017, Summer 2018
Algorithm and Data Science Intern

· Implement state-of-the-art Optical Character Recognition(ORC) technique to recognize and classify Chinese characters.
· Implement object recognition and classification deep learning method to eliminate poor quality products during the assembly process.

Western Connecticut State University, CT September 2014-May 2018
Research Assistant/Mathematics Tutor

· Research on applied math projects include signal processing, financial forecasting, data analysis, and price optimization.
· Tutor undergraduate math courses include calculus, statistics, discrete math, and differential equation.

PUBLICATIONS

Nguyen, H. Q., Rahimyar, A. H., Wang, X. (2019). Stock Forecasting using M-Band Wavelet-Based SVR and RNN-LSTMs Models. arXiv preprint arXiv:1904.08459.

Nguyen, H. Q., Wang, X. (2016). Pseudo Quantum Steganography with Color Barcode in M-band Wavelet Domain. International Journal of Signal Processing, 1, 160-168.

ACADEMIC ACHIEVEMENTS

Cigna Fellowship, University of Connecticut 2019

Gloria Brunell Award in Mathematics, Honors Convocation, WCSU 2017

Honorable Mention, The Interdisciplinary Contest in Modelling 2017

Outstanding Presenters Award, Joint Mathematics Meeting 2016

COMMMUNITY SERVICES

Youth Research Mentor, Danbury Math Academy

Who Want To Become A Mathematician, Western Connecticut State University

Relay for Life, Western Connecticut State University

Permaculture Garden Clean-Up, Honors Student Organization