Hong Minh Thu Bui

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EDUCATION

Purdue University | West Lafayette, IN
Ph.D. Student in Computer Science Aug 2021 - Present
Research Interests: Out-Of-Distribution Problems, Image Classification, Graph Generative Models
Advisor: Professor Bruno Ribeiro (https://www.cs.purdue.edu/homes/ribeirob/)

Trinity College | Hartford, CT
Bachelor of Science in Computer Science and Mathematics with Honors Sept 2017 - May 2021

- GPA*:* 3.851/4.0
- Honors: Magna Cum Laude, Phi Beta Kappa
- Awards: Marjorie V. Butcher Actuarial Studies and Applied Mathematics Prize 2021, Phi Gamma Delta Prizes in Mathematics 2019, 2020

RESEARCH EXPERIENCE

Color Invariant Project **Purdue University**
Supervisors: Professor Bruno Ribeiro, Professor Raymond A. Yeh In progress

- Utilized pretrained API models for image classification tasks.
- Incorporated color invariance to be robust across diverse color schemes and enhance adaptability.
- Authors: Thu Bui, S Chandra Mouli, Raymond A. Yeh, Bruno Ribeiro

Chatter Classification Project **Purdue University**
Supervisors: Professor Bruno Ribeiro, Professor Raymond A. Yeh Under Submission

- Collaborated with Mechanical Engineers to build a real-time model classifying Chatter events from CNC machines achieving 96% accuracy in known parameters and 94% accuracy in unknown conditions.
- Presented research findings at Purdue University's SMART Films Consortium.
- Secured 1-year funding from AnalytiXIN – IN for research.
- Authors: Eunseob Kim, Thu Bui, Junyi Yuan, S Chandra Mouli, Bruno Ribeiro, Raymond A. Yeh, Michael P. Fassnacht, Martin B. G. Jun

Generative Graph Model Evaluation Project **Purdue University**
Supervisors: Professor Bruno Ribeiro, Professor David I. Inouye Under Submission

- Developed a metric and data splitting method for evaluating Generative Graph Models, enhancing assessment by distinguishing meaningful and novel models from memorization of the training set or production of non-meaningful graphs.
- Authors: Mai Elkady, Thu Bui, Bruno Ribeiro, David I. Inouye

Undergraduate Research Assistant **Trinity College**
Senior Thesis – Supervisor: Professor Ryan Pellico May 2019 – May 2021

- Devised a method for finding the shortest path in graphs through spectral graph theory.
- Developed a library of functions to study patterns and symmetries in the spectrum and vibration modes of Hanoi Graphs.
- Funded for two 10-week summer research programs.
- Presented research at the Mathematical Association of America Northeastern Section Fall 2019 Conference.

WORK EXPERIENCE

Teaching Assistant **Purdue University**
Department of Computer Science Sept 2021 – Present

- Instructed two CS180 labs, total 60 students: covering fundamental Java concepts for Computer Science and Data Science majors.
- Conducted weekly office hours and graded assignments.

Summer Intern **Vietnam**
Shinhan Bank (Retail Business Development Department) May 2018 – Aug 2018

- Conducted monthly market surveys of interest rates, retail products and competitive analyses to identify trends and enhance profitability, reduce costs, and increase market share.

TECHNICAL SKILLS

- Programming Languages: Python (PyTorch), Java, R, C, MATLAB
- Software: LaTeX, Microsoft Word, Excel, PowerPoint