Ngu Dang

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Education

Boston University **09/2020 - 05/2026 (expected)**
Doctorate in Computer Science
- **GPA:** 3.93/4.00 – Passed the PhD Candidate Qualifying Exam
- **Relevant Coursework:** Machine Learning, Natural Language Processing, Data Science (IBM Professional Certificate)

Clark University **01/2018 - 05/2020**
Bachelor of Arts in Computer Science
- **Minors:** Data Science, Mathematics
- **GPA:** 3.93/4.00 – First Honors Dean's List in 2018, 2019, and 2020
- Graduated with *Summa Cum Laude* and obtained *Outstanding Academic Achievement Award in CS*.

Skills

Programming: Python, Java, C, C++, MySQL
Libraries: Pandas, Numpy, PyTorch, TensorFlow, Scikit-learn, Seaborn, NLTK
Script: HTML, CSS, LaTeX
OS/Tools: Linux, Windows, Git, Jupyter, Google Colab, Visual Studio, Microsoft Office Suite

Projects

Edible Mushroom Classifier **07/2024 – 08/2024**
- Implemented a Random Forest model classifying edible mushrooms from toxic ones based on physical characteristics.
- The dataset used in this project (train and test) was generated from a deep learning model trained on the UCI Mushroom dataset. The training set contains 3116945 data points; the test set contains 2077964 data points, with 22 features.
- The model achieved an accuracy score of 0.987. Github link

Disaster Tweets Classifier **04/2024 – 05/2024**
- Implemented a model classifying disastrous Tweets from regular ones using DistilBERT by HuggingFace, which was trained on over 7000 tweets.
- The model achieved an accuracy score of 0.818. Github link

Digit Recognizer **10/2023 – 11/2023**
- Implemented a Digit Recognizer model using Convolutional Neural Network (CNN) trained on the MNIST dataset.
- The model achieved an accuracy score of 0.988. Github link

House Price Predictor **07/2022 – 08/2022**
- Implemented a House Price predictor model using CatBoost Regression where the data contains 2919 entries, each with 79 explanatory features describing most aspects of residential homes in Ames, Iowa.
- The model achieved an RMSE score of 0.13. Github link

Experience

Boston University **09/2020 – present**
Graduate Research & Teaching Assistant
- Working on joint projects with professors, postdocs, and PhD students where we study the computational lower bounds (i.e., Omega) and upper bounds (i.e., big-O) of complex algorithms and design improvements.
- Leading weekly discussion/lab sections, office hours, for Algorithms and fundamental math classes such as Discrete Math, Linear Algebra, and Probability.
- Grading assignments and exams and supervising a team of 5 undergraduate course assistants and graders.

Clark University **05/2019 – 05/2020**
Undergraduate Research Assistant
- Contributed to computer vision and computational geometry research projects in the Computer Science Department.
- Implemented experiments, statistical analysis, visualization, and geometrical simulations in Python and Java.

Publications

- Marco Carmosino, **Ngu Dang**, Tim Jackman. Finding Circuit Extensions For XOR in Polynomial Time. 2024. *Symposium On Theory of Computing (STOC' 25)*, Under Submission.
- Mariah Papy, Duncan Calder, **Ngu Dang**, Aidan McLaughlin, Breanna Desrochers, and John Magee. 2019. Simulation of Motor Impairment with "Reversed Angle Mouse" in Head-Controlled Pointer Fitts's Law Task. *In Proceedings of the 21st International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'19); ACM, Pittsburgh, PA, USA*. DOI