TRANG NHAT PHUONG NGUYEN
ENTRY LEVEL SOFTWARE ENGINEER

@ trangnguyen1271994@gmail.com   🌐 https://github.com/trangnguyen127   📞 (206) 369 – 7707   📍 Lynnwood, WA 98037

SUMMARY
An entry level software engineer who is passionate about data science and machine learning. Proficient in Python, Java, SQL, Algorithms, Data Structure, Object Oriented Design, Machine Learning, and Linux. Excellent at mathematics, physics, multi-tasking, collaboration, creativity, self-tutoring, and deadline commitment. Practiced as a structural engineer for three years. Worked in the industry as a structural engineer for three years before returning to grad school to pursue a MSCS. Excellent student, fast learner, graduated from university with a high GPA and scholarships.

SKILLS
- Python
- Machine Learning
- SQL
- Numpy
- Android Studio
- Collaboration
- Java
- HTML
- PHP
- Linux
- Matplotlib
- Communication
- C
- CSS/ Bootstrap
- Clingo
- Scala
- Scikit-learn
- Time Management
- Data Structures
- Javascript
- Regex
- Apache Spark
- ROS
- Creativity
- Algorithm
- Flask
- Pandas
- PyTorch
- Azure
- Analytical

PROJECTS
- **Design Gesture Control Mobile Application** (February 2024): Used Android Studio to design an application displaying and recording videos of gestures. The frames extracted from the videos were used as training data for the machine learning model to identify gestures. Obtained 93% accuracy.
- **Robot Delivery in Warehouse** (July 2023): Used Clingo to write an answer set programing to direct a robot delivering orders to correct destinations under state constraints and action constraints with specific preconditions and effects of each action.
- **Data Visualization** (July 2023): Used appropriate data visualizations for data mining tasks such as: cleaning up data, choosing important features, or identifying feature correlation, then use data to build machine learning model. The final accuracy is 0.85 for Gradient Boosting Classifier.
- **Domain-Adversarial Training of Neural Network** (April 2023): Used PyTorch to build Convolutional Neural Networks for Feature Extractor, Label Classifier, and Domain Classifier and train the classifier by SVHN dataset as source domain. Implement the classifier to classify MNIST dataset as target domain and obtain the target test accuracy of 75%.
- **Extract Features and Cluster Validation** (April 2023): Extracted Time Series Property from the dataset collected by sensor using Pandas. Extracted and selected useful features to train a model using KMeans Algorithm and DBSCAN Algorithm. Obtained the KMeans entropy of 0.35 and the DBSCAN entropy of 0.28.
- **Classification Using Neural Networks and Deep Learning** (February 2023): Built Convolutional Neural Networks by compiling multiple processing layers including Convolutional Layer, Pooling Layer, Fully Connected Layers, Activation Layer, and SoftMax Layer for visual classification application, then evaluate the performance of the CNN using Keras and TensorFlow libraries.
- **Hot Spot Analysis** (December 2022): Performed large-scale data processing on geospatial dataspace using Apache Spark and Scala to find the number of pickups at each pickup zone.
- **Sequential Decision-Making** (November 2022) Used Fast Downward and PDDL to instruct an AI agent to achieve the desired goal.
- **Neural Network for Collision Prediction** (November 2022) Used PyTorch's libraries, Matplotlib, reinforcement learning algorithms, forward propagation, and back propagation to train a robot wandering around a simulated environment created by Pymunk and Pygame without any collisions.
- **Predict House Pricing on Kaggle** (July 2021): For preprocessing, used SimpleImputer to fill in missing values, OneHotEncoder to transform categorical data, log transformation to normalize the target value, MinMaxScaler to scale the data, PolynomialFeatures to enrich data's features, RandomForestRegressor to select important features, used GridSearchCV to tune hyperparameters, and Pipeline to prevent data leakage. For the classifier, used XGBoost, KeraRegressor, and SVR for first level of stacked-ensembling model, and LinearRegression for second level. For visualization, use Seaborn and Matplotlib.
- Designed a finance webpage to register account, log in, log out, manage stocks through buying, selling and checking history by Flask. Real time updating the stock values by connecting with an online database by using SQL through Flask.
- Designed a Self-Introduction Homepage by using HTML to structure web page and content, CSS/ Bootstrap to design the presentation of the web page and Javascript to design button and form to forward emails.

EDUCATION
- **Master of Computer Science** (Cumulative GPA: 3.85)
  Arizona State University, Tempe, AZ   Oct 2023 - Expected Graduation Date: May 2024
  - **Relevant Coursework:** Data Processing at Scale, Artificial Intelligence, Statistical Machine Learning, Data Mining, Introduction to Deep Learning, Data Visualization, Knowledge Representation and Reasoning, Distributed and Multiprocessor Operating Systems, Mobile Computing
- **Bachelor of Civil Engineering** (Cumulative GPA: 3.71/ Honors: magna cum laude)
  Saint Martin's University, Lacey, WA   Aug 2014 - May 2016
- **Associate of Science** and **Associate of Art** (Cumulative GPA: 3.88)
  Pierce College, Lakewood, WA   Sep 2011 - June 2014

CERTIFICATION
Operating Systems
Issued Organization: Continuing and Professional Education Arizona State University
Computer Organization and Assembly Language Programming
Issued Organization: Continuing and Professional Education Arizona State University
Certificate for Introduction to Linux   ID: 276b81f2f0df4bf48efe393aef266e37
Issued Organization: edX/ Linux Foundationx

WORK EXPERIENCE
- **Engineer in Training (EIT), Civil Tech Engineering** (06/18/2018 – 06/26/2019)
  Self-tutor to update knowledge of building codes, structural analysis software, and analysis of non-structural items based on clients' requests.
- **Engineer in Training (EIT), OAC Services Inc.** (07/05/2016 – 03/31/2018)
  Predict the structures' as-built condition, then use structural software to build up models of the existing structure.

HONORS ACHIEVEMENT
- Transfer Merit Scholarship
- Phi Theta Kappa Member Scholarship