Gilbert A. Glaubitz

3424 Rustic Way Lane, Falls Church, VA
703-953-0137 | e.pirazzi@gmail.com

Professional Objective

Strong problem solver looking for software development opportunities in machine learning/neural networks or related areas.

Relevant Projects

- Developed a PyTorch convolutional neural network (CNN) that predicts steering angles for use by an autonomous vehicle
  - Issues
    - Biased data sets
    - Incompatible data formats
  - Resolution
    - Identified suitable data sources of 148k images
    - Applied necessary transformations
  - Results
    - Model's predicted steering angle error was minimized

- Developed a TensorFlow/Keras CNN that predicts steering angles for use by an autonomous vehicle
  - Issues
    - Memory leak in TensorFlow .fit() function, causing out-of-memory error and 99% CPU utilization
  - Resolution
    - Wrote custom training functions to work with TensorFlow/Keras
  - Results
    - CPU utilization during training lowered to 35% on average, 54% maximum
    - Training no longer exits with out-of-memory error

- Ported PyTorch and TensorFlow/Keras CNNs to Amazon Web Services (AWS) to collect data on CNN training and test performance across four instances with varying specifications
  - Results
    - NVIDIA T4 Tensor Core g4dn.xlarge instance trained fastest, finishing after 15 minutes and 36 seconds
    - Intel Xeon t2.micro instance trained slowest, finishing after 108 hours and 54 minutes

Education

Master's in Computer Science – NOVA/GMU (expected graduation May 2024)
MM, BM

C and C++ - Harvard EdX CS50
Software Design ITP 100, structured and object-oriented design – NOVA
Building Deep Learning Applications with Keras 2.0 – LinkedIn Learning
Deep Learning: Image Recognition – LinkedIn Learning
Introduction to Containers w/ Docker, Kubernetes & OpenShift – Coursera
Azure Devops Crash Course : Build CI/CD release pipelines – Udemy, R. Shetty
C# Basics for Beginners – Udemy Business Collection, M. Hamedani
DevOps Foundations: Lean and Agile – LinkedIn Learning
DevOps Foundations: Containers – LinkedIn Learning
Codecademy Python 3