Jack Nguyen

Github: github.com/SimpleArt **Phone:** (386) 344-3999
Math StackExchange: bit.ly/3yNNxHI **Email:** jackyeenguyen@gmail.com

SKILLS

Engineering: Open Source Projects, Object Oriented Programming, Functional Programming, Concurrent Programming (Asynchronous / Multithreading / Parallel-Processing), Artificial Intelligence, Data Science, Machine Learning, Backend Web Development.

RELEVANT EXPERIENCE

Machine Learning **2018 - Present**

- **(Project) Easy Genetic Algorithm (EasyGA):** bit.ly/3MFdHjS
  - Designed a Python package to allow users to easily create genetic algorithms with only 5 lines of code that has received 40K+ downloads/pip installs in only 6 months. Published in Towards Data Science journal - bit.ly/3EubcOe
- **(Research) Nevada National Security Site (NNSS)**
  - Implemented Ensemble Neural Network in Python with uncertainty quantification metrics.
  - Produced hundreds of models with increased MSE over singular models with ensemble approach.
  - Publishing results via a presentation in the Pacific Northwest – SIAM conference.
- **(Project) Easy Neural Networks (EasyNN):** bit.ly/3MxP9JJ
  - Designed and implemented neural network Python package. Released to PyPI package repository. **URL**
  - Wrote entire neural network functionality from scratch to learn the algorithm in full detail.
  - Implemented NoSQL database for user analytical feedback during training.

Open Source Projects **2018 - Present**

- **(Project) Pretty Formatter:** https://simpleart.github.io/prettyformatter/
  - Data formatter/visualizer that helps format data in a human-readable format.
- **(Project) Advanced Databases**
  - Pure Python databases emphasizing simplicity and performance.
- **(Projects) Other Projects:**
  - **Simultaneous Perturbation Stochastic Approximation:** bit.ly/3Lrhpwi
  - **PyRoot – Rooting Finding Python Package:** bit.ly/3wDJuuO

Mathematics **2015 - Present**

- **(Community) Math Stack Exchange:** bit.ly/3lo4alt
  - Reached over 3.3 million users by helping answer over 2300 complex mathematical questions.

PRIOR EXPERIENCE

Research – Engineering Physics Propulsion Lab (EPPL) **2020-2022**

- Using Python Implemented asynchronous code base for simulated spacecraft controls platform. Formatted code to ensure reliability of thrusters while implementing asynchronous functionality.

Computer Science Tutoring - Embry Riddle Aeronautical University **2022 - Present**

- Assisted students learning programming for the first time. Provided thorough feedback on homework assignments and worked with 5-20 students during tutoring sessions.

Math Tutoring - Embry Riddle Aeronautical University **2021 - 2022**

- Explained complex topics to students in a way that fit an individual's needs. Covered a diverse set of topics from Linear Algebra, Differential equations, Discrete mathematics, and linear optimization.

EDUCATION & CERTIFICATION

- Masters of Science in Software Engineering, Embry Riddle Aeronautical University. **Graduation - Spring 2024**
- Bachelor of Science in Computer Science, Embry Riddle Aeronautical University, **GPA: 3.67**
- Bachelor of Science in Computational Mathematics, Embry Riddle Aeronautical University,

PUBLICATIONS

- **Evolving Altitude Controller:** Designed a flight control system that runs on a genetic algorithm to maintain altitude while learning from past examples. Published article in Toward Data Science journal - bit.ly/3L4nnni