

Robert Sharp

Full Stack Python Developer, Mentor & Instructor

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Skills

Programming Languages: Python (10 years), C++ (5 years), Cython

Cloud & Microservice APIs: AWS Beanstalk, Heroku, Flask, FastAPI, MongoDB, Docker

Machine Learning & Neural Networks: Scikit-learn, TensorFlow, Numpy, SciPy

Web Design, Development & Hosting: HTML5, CSS3, JavaScript, WordPress PHP, C-panel

Remote Software Development: Pair Programming via Zoom, Slack, Repl.it, GitHub

Projects

- MonsterFactory:** Full Stack Python/C++ Web App (Flask) 2020-2021
- Designed and Built D&D Fifth Edition Random Monster Generator
 - Based on Fortuna & Storm (see below)
- Fortuna:** Python C-extension Library (Cython) - Random Value Toolkit 2018-2020
- Designed to replace and expand upon the Python random library
 - Achieves 10-15x performance increase over the built in random library
 - Built custom test suite for non-deterministic distribution analysis
- Storm:** C++17 Header Only Library - Random Number Toolkit & Custom RNG Engine 2018-2020
- Built to power Fortuna, encapsulated to support other projects
 - Designed the core engine - Hurricane, a custom Mersenne Twister RNG engine
 - Ported several distribution algorithms from other languages to augment those in STL

Employment

- TeeterPal:** Python Instructor, Remote 4/2021-present
- Provided online Python instruction for ages 7–14 via Zoom (Group Classes).
 - Developed entertaining Python curriculum specifically for a younger audience.
 - Designed and delivered Data Science curriculum for especially gifted students (1:1 Classes).
- Wyzant.com:** Personal Python Tutor, Remote 10/2020-present
- Provide online tutoring for all things Python, from for-loops to the unique philosophy of Python.
 - Basic to advanced Python syntax and style. The power of using a great IDE and linter.
 - Code debugging service with tips and tricks to help students learn how to debug their code.
 - Performance optimization strategy workshops, featuring time complexity and Big-O notation.
- Lambda School:** Part Time Teaching Assistant, Remote 5/2020-present
- Associate Data Science Lead: Acting Data Science Manager for Lambda Labs.
 - Section Lead: Managed a team of 5 Project Leads serving 53 students.
 - Project Lead: Organized developer team of 10 to monitor project progress and provide technical expertise.
 - Curriculum Contributor: Produced a series of hands-on assignments for programmers new to Python.
 - Team Lead: Mentored a team of 9 students and guided them through data science coursework.
- Sharp Design Digital:** Owner/Operator 6/1999-6/2020
- Web Designer, Developer & Hosting Provider: Build and maintain e-commerce WordPress sites.
 - Software Developer: Designed and built apps as high-performance c-extensions for Python.
 - Product Photographer: Photograph retail products and fine art for web clients.