Grant Skaggs

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Education

May 2022 **University of Texas at Austin**, *Turing Scholar Honors Program*
B.S. Computer Science & Philosophy Minor; **GPA: 3.96**

Coursework: Algorithms, Data Structures, Data Mining, Operating Systems, Computer Architecture, Cryptography, Quantum Computing, Graphics, Physical Simulation, Competitive Programming

Experience

Summer 2021 **Wolfgang AI**, *Founder*
- Started a company to sell artwork generated using modern artificial intelligence algorithms
- Created an online e-commerce shop and A/B tested consumer preference for content and aesthetics

Summer 2020 **Duolingo**, *Software Engineering Intern*
- Deployed a weekly timer boost prize for premium subscribers of Duolingo's **iOS** app
- Worked closely with product designers to implement the new feature's user interface using **Swift** and **UIKit**
- Developed the backend API in **Python, Java,** and **Kotlin;** recorded prize usage in a **SQL database**

Summer 2019 **University of Texas at Austin**, *Undergraduate Research Assistant*
- Applied **recurrent neural networks** to cache **data prefetching** in modern computer architectures
- Developed and tuned a two-layer **LSTM** neural model using **TensorFlow** and **Python** to prefetch addresses

Mentorship

Fall 2020 - Present **University of Texas Computer Science Department**, *Pod Mentor*
- Leading a small group of first year CS students in a weekly seminar to build CS community and connect students to CS-specific resources

Spring 2021 **University of Texas Computer Science Department**, *Teaching Assistant*
- Held office hours and graded programming assignments for an honors-level Computer Graphics course
- Advised students on a final research project focused on independent inquiry in the field

Summer 2019 **Austin Chinese Educational Services**, *Course Instructor*
- Led introductory Python and Scratch courses for elementary and middle school students; designed the course objectives and curriculum; taught daily lectures; helped students with their course projects

Projects

Summer 2020 **Pyxeled**, *Python*
- Applied **machine learning** fundamentals to transform normal photographs into aesthetic pixel art
- Implemented intelligent **clustering alogorithms** to preserve image features at lower resolutions and limited color palettes; published a webpage gallery to exhibit generated pixel art

Summer 2019 **RayTracer**, *C++*
- Developed a **ray-tracer** in **C++** to render 3-Dimensional scenes
- Implemented features: Polygonal meshes, 3D object rotation/distortion, recursive reflection and refractions, point and directional lighting, multithreading, variable material types, shadows, specular and diffuse shading

Honors / Awards

Academic: National Merit Scholar, National AP Scholar, Phi Beta Kappa Scholarship, CLHS Valedictorian, National Honor Society President

STEM: AIME Qualifier, Science Olympiad Gold Medalist, HackTX CDK Global Award, USACO Gold Ranking