Grant Skaggs

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Site: grantskaggs.com

Education

May 2022 **University of Texas at Austin**, *Turing Scholar Honors Program*
B.S. Computer Science & B.S. Mathematics; **GPA: 3.97**

Experience

Summer 2020 **Duolingo**, *Software Engineering Intern*
- Deployed a new weekly in-app prize for paid subscribers; developed the feature for the iOS app in Swift
- Implemented the backend API in Python, Java, and Kotlin; recorded prize usage in a PSQL database

Summer 2019 **University of Texas at Austin**, *Undergraduate Research Assistant*
- Applied recurrent neural networks to the problem of 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 **UT 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

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 at grantskaggs.com/pyxeled

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

Dec. 2018 **Webcrawler**, *Java*
- Designed a Java application for web crawling, page indexing, and search
- Included a graphical user interface, page-ranking features, and a robust web query parser

Skills

Programming Languages: C/C++, Java, Python, Swift, HTML/CSS, Git, Bash

CS Coursework: Algorithms, Data Structures, Operating Systems, Computer Architecture, Discrete Math, Data Mining, Quantum Computing, Computer Graphics, Competitive Programming

Honors / Awards

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

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