
AUSTIN LAU

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EDUCATION

Princeton University | Princeton, NJ

Class of 2023

B.S.E. Operations Research and Financial Engineering

GPA 3.925

Certificates: Computer Science, Statistics and Machine Learning

Relevant Coursework: Algorithms and Data Structures, Reasoning about Computation, Computer Science, Optimization, Financial Mathematics, Probability and Stochastic Systems, Statistics, Economics

SKILLS

Programming Languages & Software: C++, Java, Python, OpenGL, AMPL, R, Excel, Git, LaTeX

Technical: Algorithm Design, Mathematical Modeling, Linear Programming, Stochastic Calculus, Computer Graphics

Design: Adobe Creative Suite (Illustrator, InDesign, Photoshop, XD), Final Cut Pro, Apple Motion

Foreign Language: Japanese (Professional Working Proficiency)

Certifications & Achievements: Eagle Scout, 2x Honolulu Marathon Finisher

WORK EXPERIENCE

Software Engineering Intern

HeyGears Inc. | Irvine, CA (Remote)

September 2020 - February 2021

- Created a K-D tree-based ray tracing algorithm to calculate the local thickness of regions on 3D meshes
- Designed a compact data serialization format for a novel volumetric representation of 3D scans and models
- Developed application to generate optimized polygonal meshes from raw volumetric model data and render output in an interactive window, using greedy algorithm in C++, OpenGL, and GLSL
- Researched dental mesh segmentation techniques using feature line detection and scikit-learn clustering algorithms

Engineering Intern

Voya Investment Management | New York, NY (Remote)

June 2020 - August 2020

- Built an automated MS workflow that saved a Voya sales team an estimated 2-3 hours per week
- Wrote SQL scripts to automate the compilation of diagnostic reports from employee databases
- Deployed Salesforce to 6,000 end user workstations using Microsoft SCCM

Business Development Manager

Karyo Inc. | Princeton, NJ

June 2019 - May 2020

- Developed UI/UX designs for mobile and desktop websites of a crowdsourced review app for concerts
- Scraped and refined web data to help build database of 24,000 musicians and venues
- Managed \$5,000 business/marketing budget and spearheaded social media advertising campaigns

Computer Science Grader

Princeton University | Princeton, NJ

February 2020 - May 2020

- Assist with grading 250 students' coding assignments for COS 226: "Algorithms and Data Structures"
- Provide students with feedback and comments to help them improve their code on future projects

INDEPENDENT RESEARCH

"Stochastic Modeling of Respiratory Disease Spread on College Campuses"; Adviser: Mete Soner

Princeton University Project X Fund | Princeton, NJ (Remote)

May 2020 - August 2020

- Wrote modular Python code to model stochastic disease transmissions between discrete agents over time
- Constructed framework of layered social network subgraphs to represent individual agent interactions
- Built a 28,000-agent model of Cornell University's student body from 100,000s of demographic data points
- Simulated the effects of varying environmental and intervention variables on viral outbreak magnitudes

CAMPUS LEADERSHIP

Head Graphic Designer | IgniteSTEM (EdTech Nonprofit)

Treasurer | Princeton Camerata Orchestra

Designer | Princeton Entrepreneurship Club