HELEN FANG

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EDUCATION

The University of Texas at Austin, Austin, TX — Expected Graduation: May 2023
Computer Science, B.S. — GPA: 4.0

Relevant Coursework: Data Structures, Linear Algebra, Discrete Mathematics, Energy Analytics (Freshman Research Initiative), Computer Architecture, Operating Systems (Fall 2020), Programming for Correctness (Fall 2020)

Technical Skills: Java, C, Python, JavaScript, HTML & CSS, Git, Linux, Google Cloud Platform, ReactJS

WORK EXPERIENCE

Google — May 2020 — Aug 2020
Student Training in Engineering Program Intern — *Remote - Austin, TX*

- Used **HTML**, **CSS**, **JavaScript**, and **Java** servlets within a Maven framework to build full-stack web applications.
- Worked closely with two other interns to design and develop a web application to create, find, save, and share local events, providing an avenue for centralizing event information and increasing community engagement.
    - Used the **Apache Spark** library to create a recommendation system that combines collaborative and content-based filtering to suggest events to users.
- Engaged in an end-to-end software development cycle, including creating design docs, writing code, mocking objects and writing unit tests, setting up continuous integration, and completing code reviews.

PROJECTS

SnapPack — *Best Use of Google Cloud Services, HackTX 2019*

- Created an Android app to determine missing items from a packing checklist using a picture of the luggage by using computer vision through the Google Cloud Vision API.

Hingle Basin — *Energy Analytics Class Final Project*

- Used a random tree regression to optimize the parameters for ten unconventional oil wells in Hingle Basin.
- Worked in **Python**, utilizing pandas and matplotlib to visualize and analyze the data.

Worksheet Generator

- Created application to generate worksheets and their corresponding answer keys with customizable configuration options such as worksheet length and export format, expediting a tedious activity for educators.
- Programmed using **Java** and **JavaFX**, incorporating the **Apache POI** interface to support .docx export.

NURBS and Polygon Models Evaluation for Video Game Graphics

- Researched the features of Non-Uniform Rational B-Splines (NURBS) and polygon meshes in 3D models and examined their respective suitability for video game graphics, summarizing these findings in a 4000-word essay.

OTHER ACTIVITIES AND EXPERIENCE

Electronic Game Design Society, *Web Development Team Member* — Aug 2020 — present

- Developed the front-end of main website using **ReactJS** and refactored old code to be more intuitive.

UT Austin Sanger Learning Center, *Math and Computer Science Tutor* — Jan 2020 — present

- Tutored other undergraduate students for data structures, linear algebra, and calculus in a one-on-one setting for 10 hours per week

Travis County Tax Office, *Media Intern* — Jul 2019— Aug 2019

- Created and updated informational videos about voter registration, vehicle titling, and more.
- Translated each video into Chinese, improving information accessibility for an important demographic.