DANIEL YOO

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UC San Diego — *Class of '23 MATH-CS Major, 3.4 GPA*

COURSEWORK: Algorithms, Computation Theory, Data Structures, Unix Environments, Cryptography, Graph Theory, Group Theory, Linear Algebra, Vector Calculus

LANGUAGES: Java, JavaScript, TypeScript, HTML/CSS/SCSS, C, C++, C#, Python, GLSL

FRAMEWORKS/TOOLS/ENVS: React, Svelte, Next, Node, Hasura, SQL, Postgres, Netlify, GraphQL, git, Jira, Vim, LaTeX, Unix, OpenGL, OSGi

WORK EXPERIENCE:

Liferay Inc. | Diamond Bar, CA — *Software Engineer Intern*

MAY 2023 - PRESENT

- Full-time intern position in the Global Services consulting team, tasked with creating an out-facing portal for a government financial department
- Designed and implemented 3 MVC web portlets under the OSGi specification as extensions of Liferay's main open-source product (Liferay DXP), populated front-end JSP components with a mySQL database
- Improved UX on the client's customer portal by optimizing React components for use alongside the Liferay Java backend
- Used agile dev cycles/SDLC best practices to organize tasks
- Developed under a continuous integration workflow using Github actions

FRC 7157 µBotics | Brea Olinda/Sunny Hills HS — *Lead Programmer*

SEP 2017 - JUNE 2020

- Developed a competition bot with multi-threaded autonomous subroutines, closed-loop control (PID), and an award-winning vision pipeline
- Integrated a suite of motor controllers and a Linux coprocessor (NVIDIA Jetson Nano) over a network-table based interface
- Taught and led a team of 8 peers throughout an intense twelve week sprint of competition, collaborated using git source control
- Wrote a custom library for a Pixy 2 cam to interface with the coprocessor over I2C protocol
- Authored majority of the robot code through the 2019, 2020 seasons (20k lines of code across two six-week build periods)

PERSONAL PROJECTS:

svo-raytracer

- Realtime Java/LWJGL voxel path tracer based on the paper *Efficient Sparse Voxel Octrees* by Samuli Laine and Tero Karras
- 2 bounces 1080p ~30fps, up to 2048^3 world size, implemented on GPU
- Created a custom octree layout to maximize memory coherency/efficiency and minimize ray traversal time

Fearsha

- Developed React/TS frontend for a payment and booking service designed for day-of booking and stat tracking in the escape games niche
- Implemented static page rendering with Next.js, created queries in GraphQL to populate front-end components from a PostgreSQL database
- Supervised and contributed to a 35k lines codebase