Kevin Chen

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EDUCATION

Yale University New Haven, CT
B.S. Computer Science, GPA 4.0/4.0 *Aug 2019 – May 2023*

Relevant courses Data Structures, Algorithms, Systems Programming, Computer Organization, Artificial Intelligence, Computer Graphics, Discrete Mathematics, Linear Algebra & Matrix Theory

Extracurriculars VP of Engineering of UX Society at Yale; Design Chair of Yale Computer Society (y/cs)

EXPERIENCE

Facebook (Remote) Menlo Park, CA
Software Engineer Intern *Jun 2021 – Aug 2021*

- Created move executor service which rebalances Twine jobs and containers for stateful services.
- Used Twine scheduler API to perform asynchronous task moves on regional jobs.
- Twine is Facebook's cluster management system used to deploy and manage applications.
- Improved fault tolerance and machine utilization; preliminary data shows up to 40k machines freed.

Yale Peabody Museum of Natural History New Haven, CT
Software Engineer (GitHub) *Jul 2020 – May 2021*

- Developed desktop app which controls a multi-gantry photogrammety imaging system.
- Integrated programmable OpenGL pipeline and removed all fixed-function calls to allow for graphical flexibility, implemented GPU instancing to reduce draw calls, reduced frame render times by over 80%.
- Implemented pub/sub & MVC design and docstring conventions for extensibility and maintenance.
- Leveraged knowledge in Git, Python, OpenGL, OOP; used wxPython, numpy, GLM, GLSL shaders.

Software Developer Intern *Jun 2020 – Jul 2020*

- Implemented intuitive OpenGL 3D viewport by researching FOSS and other CAD software.
- Leveraged knowledge in Git, Python, OOP; used wxPython, OpenGL, C++, Perl. Practiced Agile and Scrum.

Yale University New Haven, CT
Computer Science Teaching Assistant *Jan 2021 – May 2021*

- Undergraduate Learning Assistant for CPSC 223, Data Structures and Programming Techniques.
- Held 6+ hrs/week office hours, helped undergraduates on course assignments and data structures topics.

Source Development Hub (Remote) New Haven, CT
Computer Science Teaching Assistant *Jun 2020 – Aug 2020*

- Undergraduate Learning Assistant for CPSC 223, Data Structures and Programming Techniques.

NIST Information Technology Laboratory Gaithersburg, MD
VR Research Intern (website) *Jun 2018 – Apr 2019*

- Developed an interactive virtual reality graphics website to represent 180+ 3D surfaces in the DLMF dataset; used A-Frame, THREE.js, and physics libraries to enable VR controllers to manipulate 3D models.
- Awarded the Outstanding Poster Presentation award; work presented at SIGGRAPH 2018 BOF session.

PROJECTS

Ray Tracing Renderer *Computer Graphics*

- Wrote ray tracer in C++. Implemented diffuse and Phong shading, mirror and glossy reflections, refractions and fresnel effects, soft shadows, jittered supersampling, and a bounding volume hierarchy (BVH).

Bulletin VR *(GitHub)* *Social WebVR*

- Developed VR website using A-Frame and THREE.js that allows users to post anonymous transcribed messages on a virtual bulletin board to tackle social anxiety; inspired by campus message boards.
- Won the Best Gaming/VR Hack at YHack 2019, out of 140+ submissions and 400+ participants.

TOOLS

Languages C++, C, Python, Java, Thrift, JavaScript, R, Scheme, HTML, CSS

Technologies UNIX, Git, OpenGL/GLSL, wxWidgets, Android Studio, LaTeX, Illustrator, InDesign, Fusion 360