Henry Wu

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Education

Purdue University *May 2023*

Bachelor of Science in Computer Science, Minor in Mathematics West Lafayette, IN

- **GPA**: 3.85/4.0
- **Coursework**: Compilers, Data Mining and Machine Learning, Object-Oriented Programming, Data Structures and Algorithms, Systems Programming, Cryptography, Linear Algebra, Computer Graphics

Work Experience

Meta (Facebook) — *Software Engineering Intern* *May 2022 - Aug 2022*

- Created UI components with React VR for a core feature responsible for the world building pipeline in Meta's Horizon Worlds
- Optimized dataflow from UI to Unity backend, improving performance by 30%
- Conducted end-to-end integration tests and unit testing to ensure high quality code
- Collaborated with cross-functional partners to implement fixes for critical user-facing bugs
- Technologies: Unity, C#, React, JavaScript, Flow

Purdue University — *Research Assistant Intern* *May 2021 - May 2022*

- Developed a web-based map visualization tool, in Jupyter Notebook, to display war movements using primary historical data from WWII
- Conducted quantitative analysis on casualty lists and battle maps in Python
- Migrated the current local database online through Google Sheets API using Python
- Maintained the project online using Google Cloud Platform
- Technologies: Python, Jupyter Notebook

Projects

Personal Website — *TypeScript, JavaScript* *May 2023*

- Designed and developed a personal portfolio website with the Next.js framework and deployed using Vercel
- Employed React, TailwindCSS, Framer Motion, and ThreeJS to develop the front-end UI, ensuring a dynamic and modular user experience

Purcle (Social Media App) — *JavaScript, Python* *May 2022*

- Implemented the direct messaging system for the platform using Python and Django
- Built the Django backend that handles webpage redirects and the user login flow

Ray Tracer — *C++* *April 2022*

- Implemented a ray tracer from scratch using LodePNG and GLM in C++
- Extended functionality by adding support for different primitives, multi-threading support, and animation exporting

CPU Rasterization Renderer — *C++, OpenGL* *February 2022*

- Implemented a rasterizer using C++ and OpenGL to render scenes with support for basic primitives and Phong lighting
- Added functionality for a flying camera with both orthographic and perspective projection modes

Custom Shell Interpreter — *C, C++* *March 2021*

- Implemented the lexer and parser in Flex and Bison to interpret command line inputs
- Added functionality such as subshells and piping to mimic the behavior of Bash

Skills

Programming Python, Java, JavaScript, C, C++, C#, HTML, CSS, Scala

Tools Node.js, Git, React, Flow, PostgreSQL, Mercurial, TailwindCSS, Next.js, Blender

Languages English (Native), Mandarin Chinese (Native)