MAYA DIAZ HUIZAR

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SKILLS

Programming Languages/Frameworks: Java, C, C++, Python, JavaScript, R, CUDA, WebGPU, SystemVerilog

Skills: GPU Programming, ISAs, VLSI, SPICE, AWS (S3, EC2), Blender, Maya

Soft Skills: Teaching, Communication, Project Management, Leading Cross-Functional Teams

EDUCATION

University of Pennsylvania, Philadelphia, PA — Expected May 2026
Accelerated Master's Program
Bachelor of Science in Engineering in Computer Engineering and Mathematics: (Cumulative GPA: 3.35)
Master of Science in Engineering in Computer and Information Science (Cumulative GPA: 3.85)

Relevant Coursework:

- **Computer Science:** Operating Systems, Compilers, GPU Programming, Advanced 3D Modeling
- **Computer Engineering:** Computer Organization and Design, Embedded Systems

EXPERIENCE

Head Teaching Assistant, Computer Architecture (Aug 2024 - Dec 2024) & Operating Systems (Dec 2024 - present)
University of Pennsylvania — *Philadelphia, PA*

- Conducted weekly office hours and recitations to support student learning, groups of 10-20.
- Assisted in creating homeworks, exams, and project specifications, wrote autograders and test cases.

Course Design Assistant, GPU Programming for Machine Learning — Oct 2024 - present
University of Pennsylvania — *Philadelphia, PA*

- Assisted in designing course curriculum, and developing assignments.

Intern — Jun 2019 - Aug 2022
Breakthrough San Francisco — *San Francisco, CA*

- Taught computer science and mathematics to middle school students, groups of 10-20.
- Communicated technical details to non-technical audience, assisted teachers and mentored high school students.

PROJECTS

WebGPU Path Tracer + NPR Stylizer + Cloth Simulation — Fall 2024
Developed a WebGPU-based path tracer with non-photorealistic rendering and cloth simulation using WGSL and TypeScript. Inspired by recent SIGGRAPH research; integrated BVH acceleration and scene loading. Live demo: GitHub.

MNYY Search — Fall 2024
Built complete search engine system including crawler (1M+ pages), indexer, and frontend. Designed scalable (KVS) and Flame worker coordinator system enabling distributed sharding, deployed and tested on AWS infrastructure

EXTRACURRICULAR ACTIVITIES & LEADERSHIP

Penn Aerospace Club (Airbrakes Team) — Sep 2022 - Sep 2023

- Developed flight control systems using C, ran simulations of systems to ensure robustness
- Worked closely with structural engineers for continuous integration, wrote documentation.

University of Pennsylvania oSTEM (Treasurer) — Sep 2023 - Present

- Managed budget of $14,000+ for events, coordinated events between 4+ teams.