

VIVIEN NGUYEN

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EDUCATION

University of California, Berkeley
Computer Science, B.A.

Expected Graduation: May 2019
Current GPA: 3.53

WORK EXPERIENCE

Software/DevOps Engineering Intern

San Francisco, CA (Jun - Aug 2017)

Braintree (PayPal), Cloud Infrastructure

- Helped build and maintain AWS-based platform for Braintree's new cloud services; this platform is currently authorizing live transactions from major enterprises
- Developed tooling to enable other teams to scale their own services on this platform
- Implemented monitoring to alert for failing pieces of infrastructure
- Introduced a new AWS region to reduce cost and service latency
- Practiced pair programming daily, contributed to operational knowledge & documentation

Course Tutor (Data Structures & Algorithms)

Berkeley, CA (Aug 2017 - present)

UC Berkeley EECS Department

- Teach a small weekly review section to communicate topics and hold office hours to problem solve with students, etc.

Lab Assistant (Data Structures & Algorithms)

Berkeley, CA (Aug 2016 - Aug 2017)

ACTIVITIES

Pioneers in Engineering, <https://pioneers.berkeley.edu>

Berkeley, CA (Sep 2015 - present)

Director (2017 - 2018)

- UC Berkeley student-run nonprofit organization that hosts a robotics competition and other outreach events for local Bay Area high school students to promote STEM education
- As director, responsible for defining goals and vision of the organization; leading 60+ staff members across 12+ projects; interfacing with alumni, corporate and university contacts, high school teachers; managing \$60,000 budget

Project Manager - Website, Event Planning, Staff Recruiting (2016 - 2017)

PROJECTS

Ray Tracer

- Wrote a physically based rendering program based on path-tracing algorithms
- Implemented ray-scene intersection, acceleration structures, physically based global illumination, and 5+ materials, including mirror, glass, and microfacet materials
- Supported environment lights and depth of field effects

Rasterizer - implemented supersampling, hierarchical transforms, anti-aliased texture mapping

MeshEdit - generate Bezier curves and surfaces, edit and Loop subdivide halfedge meshes, shaders

Cloth Simulator - real-time cloth simulation using mass and spring system, numerical integration-defined movement, collisions

The Duel - created a 30 second 3D animated short as the project manager with a team; worked on modeling, materials, lighting, and post-production editing

SKILLS & INTERESTS

Technical Skills: Java, Python, C++, Bash, Autodesk Maya, Pixar Renderman, Adobe Suite, HTML, CSS

Familiarity With: C, AWS, Terraform, Ansible, Cassandra, Datadog, JavaScript, SQL, Unity

Relevant Classes: Computer Graphics, Data Structures, Machine Structures, Algorithms, Linear Algebra, Discrete Math & Probability, Operating Systems (current), Networking (current)

Interests: Computer graphics, rendering, infrastructure & architecture, DevOps, UI/UX, STEM outreach, digital humanities, art