

DORIAN CHAN

UC Berkeley - Electrical
Engineering and Computer
Science
2015 - 2019
CS GPA: 3.85

✉ dorian8x8@berkeley.edu

🌐 antiamoebic.com

📄 github.com/antiamoeba

☎ 1-408-568-7735

CLASSES

- Graduate Computer Graphics
- Machine Learning
- Artificial Intelligence
- Database Systems
- Signals and Systems
- Data Structures
- Computer Architecture
- Discrete Math and Probability
- Algorithms
- Augmented/Virtual Reality
- Operating Systems
- Internet Networks

SKILLS

- C++ (OpenCV, OpenGL)
- Java (Hibernate)
- Python (OpenCV, Numpy/Scipy)
- Javascript (Node.js, React, socket.io, Meteor, Electron, jQuery, WebRTC)
- Databases (SQL, MongoDB)
- Jenkins Pipelines (Groovy)

EXPERIENCE

Naehas Software Engineering Intern - Summer 2017

- Developed a scheduling system with database integration for reliably running jobs at recurring times. (Java, MySQL, Javascript)

W2BI Research and Development Intern - Summer 2016

- Integrated computer vision and convolutional neural networks/support vector machines to gauge camera quality. (Python, C++, C#)
- Developed an audio signal processing algorithm using fourier transforms, convolutions, and other frequency analysis techniques to test sound quality. (Python)
- Built a Jenkins pipeline to automate build and testing of software products. (Groovy)

Aberration Compensated Displays for Personalized Vision Correction Researcher - Fall 2017 → Present

- Providing vision correction using software, rather than glasses or contact lenses. (C++)

Atka Research Project Researcher - Fall 2015 → Spring 2016

- Worked on HTML and Javascript modules to help keep user information secure on both the client and the server, integrating cryptography and webworkers to ensure privacy. (Node.js, Meteor, Javascript, HTML)

CS61b Course Staff Tutor/Lab Assistant - Fall 2016 → Present

- Taught data structures and algorithms such as trees, graphs, and quicksort to introductory computer science students. (Java)

PROJECTS

Lava Lamp Fluid Simulation Computer Graphics - Summer 2017

- Implemented the Smoothed Particle Hydrodynamics algorithm in order to simulate the behavior of liquid in a virtual lava lamp. (C++)

Advanced Poisson Panoramas Computer Graphics - Spring 2017

- Developed new techniques using the Poisson equation to smoothly and efficiently stitch multiple images together into a panorama. Developed specialized quadrees and multigrid solvers for faster solving. (Python)

Sphere Mesh Modeling Computer Graphics - Spring 2017

- Converted 3D mesh surfaces into sequences of volumetric spheres, using a spherical quadric error metric and gradient descent. Worked with hashmaps, hashsets, and priority queues for efficient edge collapsing and surface representation. (C++)

Ray Tracer Computer Graphics - Fall 2016

- Built a ray tracer from scratch, using data structures like Binary Space Partitioning trees and Bounding Volume Hierarchy trees to quickly and efficiently convert 3d scenes into 2d images. (C++)

Jeopardy Bot Machine Learning - Summer 2015

- Implemented a recurrent neural network from scratch, integrating word2vec, a sentence parser, and other natural language processing techniques to answer past Jeopardy questions. (Javascript)

Collaborative Text Editor Data Structures - Spring 2016

- Created a text editor from scratch using JavaFx and linked lists for speed and undo/redo functionality, implemented an operational transform algorithm for Google Docs style collaboration over the web. (Java)

Prism(prismize.com) Web - Summer 2017

- The modern evolution of the chatroom, designed to foster discussion of different viewpoints from people all around the world. Built with easy scalability with a load balancer, websockets, React, and a focus on atomic operations. (Node.js, MongoDB, React.js, load balancing, websockets)