

Sean Siddens

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EDUCATION

University of California, Santa Cruz

September 2020 - Present

Bachelor of Science in Computer Science, GPA 3.96

Relevant Coursework:

- Data structures and algorithms, computer architecture, database systems, full stack web development, computer networking, discrete mathematics, linear algebra

LANGUAGES AND TOOLS

- Proficient: Javascript, Python, C, HTML/CSS, SQL, C++, React, Unix, Git
- Past Experience: Rust, Haskell, GLSL, OpenGL/WebGL, Vulkan

PROJECTS

- **LemmeNote (Javascript/React, HTML/CSS)**
 - Channel based real-time chat web app
 - Serverless (SST) framework
 - DynamoDB for persistent storage of messages, connections, and notepads
 - Cognito for user authentication and identity management
 - API Gateway and Lambda
 - WebSockets for instant messaging
 - Static React site stored in S3
- **Multithreaded HTTP Server (C)**
 - Thread-pool design to concurrently handle multiple clients over sockets
 - Use of POSIX synchronization primitives to preserve server-side coherency and atomization
- **Slime Mold Simulation (C++, SDL2, OpenGL, Dear ImGui)**
 - Agent-based simulation of the pattern formation and foraging behavior of slime molds.
 - Uses OpenGL compute shaders to update positions of agents every time step
 - Change simulation parameters at runtime using ImGui window

INTERNSHIP EXPERIENCE

Coastal Marine Biolabs, Ventura, CA

November 2019 - March 2020

Intern at Coastal Marine Biolabs processing and archiving insect specimens for use in the International Barcode of Life Project.