1700 Botelho Dr, Apt 229
Walnut Creek, CA 94596

GRANT REED

grant.davis.reed@gmail.com
GrantDReed.github.io

EXPERIENCE

Co-creator / Software Engineer   **Ouroboros**

In-browser, reflex-based p2p Snake game built with Node, React, Redux, and WebRTC

- Implemented a Conflict-free Replicated Data Type (CRDT) to ensure eventual consistency of game state across peers
- Devised predictive algorithms to improve user experience
- Optimized collision checking and display rendering via an intermediary data structure with $O(1)$ lookup
- Implemented data buffers to ensure accurate winner determination and smooth end-of-game transition for all peers
- Achieved lowest possible latency via a full-mesh network topology
- Wrote a detailed paper on the development process
- Collaborated with a remote team member on a daily basis
- **Website**: https://ouroboros-game.herokuapp.com/about

EDUCATION

Davis, CA   **University of California**   **2011 - 2014**

- B.S. in Evolution, Ecology, and Biodiversity

PROJECTS

Reaction

- Clone of Trello project management software
- Implemented with Rails backend and React frontend
- Demo: https://reaction-trello-clone.herokuapp.com

LANGUAGES AND TECHNOLOGIES

- Javascript, Ruby, PostgreSQL, HTML, SASS, CSS
- React, Redux, Ruby on Rails, Sinatra, Git, WebRTC, decentralized architectures

PREVIOUS EMPLOYMENT

Lab Technician II   **California Seed and Plant Labs**   **August 2014 - August 2015**
Seed Health Lab

- Increased processing volume by repurposing unused office space, carried out QA experiments, improved workflow via new filing system, and promoted to Lab Technician II after 3 months.

Lead Field Technician   **University of Toronto Mississauga**   **May 2013 - August 2014**
McCauley Lab

- Built temperature-controlled aquaculture tanks, and promoted to Lead Technician after first season