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GRANT REED

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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>

Freelance developer

Self-employed

2016 - Present

Personal projects:

- Reaction: A Trello-like project management tool
 - Rails + Webpack + React/Redux + Heroku
 - Demo link: <https://reaction-trello-clone.herokuapp.com>
- MyFlix: Netflix clone
 - Rails + JQuery + HAML + SASS
 - Github: <https://github.com/GrantDReed/myflix>
- TodosTracker: Clean and simple task management tool
 - Sinatra + Postgres + Sequel ORM
 - Github: <https://github.com/GrantDReed/todos-tracker-sequel>

EDUCATION

Davis, CA

University of California

2011 - 2014

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

LANGUAGES, TECHNOLOGIES, CONCEPTS

- Javascript, Ruby, PHP, Python, SQL, HTML, CSS
- React, Redux, Express, Ruby on Rails, jQuery, Git/Github, WebRTC, SASS
- Data structures and algorithms, distributed systems, schema design, OOP, REST

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