

# {MICHAEL FRENO}

SOFTWARE ENGINEER

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## PROFESSIONAL EXPERIENCE

### **Data Annotation**

*AI Alignment Engineer (Jan. 24 - Current)*

- Test AI models in many programming languages
- Fix code created by AI models, with explanations as to why it is wrong / what needed to be improved
- Grade other human engineers on their gradings / corrections / interactions with AI models
- Red team models - try to get them to write code that is incorrect / unethical / illegal

### **Self Employed**

*Indie Game Developer (Nov. 23 - Current)*

- Full product lifecycle - Manage all phases from ideation, prototyping, and development to launch and live operations.
- Design and implement game mechanics, UI/UX, visual assets and (some)original audio.
- Design server and database architecture
- Set up telemetry and user feedback channels to inform ongoing balancing and feature development.

### **Self Employed**

*Freelance Website Developer (Jan. 23 - Current)*

- Communicate with clients to determine what their needs are
- Provide design drafts to nail down aesthetic preferences
- Develop website and deploy

## **MAJOR PROJECTS**

### **FlexLöve**

*The most advanced UI library for LÖVE 2d (game engine)*

- Utilizes a flexbox layouting logic so anyone who knows css can run with it
- Dual mode rendering, both immediate (elements recreated every frame to reflect state changes) and retained (elements are persisted - more performant)
- Powerful theming support - custom parsing of 9patch files (resizeable bitmaps)
- Powerful and granular event handling
- CI/CD Pipeline that creates fully detailed (and versioned) documentation and creates releases of varying sizes (optional modules)

### **Life and Lineage**

*A mobile game built utilizing React Native.*

- Complex State management using mobx
- Per-User Cloud Database implementation for cloud-saves
- Implemented PvP with offline progression and automated notifications
- Implemented JSON hotfix solution that allows for balancing updates from change to live in minutes
- In-app purchases using RevenueCat
- Currently available in Apple's App Store.

**freno.me**

*My portfolio / blog*

- <1.5s P99 First+Largest Contentful Paint across hundreds of visitors
- On-site text editor, with database persisted history(diffs) for quick rollbacks, supports complex diagram creation and AI text completions(infill) using a remote self-hosted model
- Branching chat section with real-time updates powered by a WebSocket written in Go. Deployed as a docker container on GCP

## PROFESSIONAL EXPERIENCE CONT.

### Self Employed

#### *Powerlifting Coach / Movement Specialist*

(Sept 2018 - 2023)

- Prepare Clients for Powerlifting Meets or improve strength and movement quality
- Develop a lifting program depending on needs and time distance to next meet
- In person coaching for movement refinement
- Accompany and manage athletes at powerlifting competitions

### Campbell Soup Company - Camden

#### *Associate Technologist (Jan. 22 - July 2022)*

- Conducted thermal test runs and analysis of product before and after processing
- Coordinated and scheduled tests amongst multiple production teams
- Managed multiple teams through the day
- Analyzed heat penetration testing with the Thermal Process Specialist and Corporate Process Authority
- Traveled to manufacturing plants to validate product processing

#### *Operator (Sept. 21-Jan. 22)*

- Produced test runs at scale
- Operated and maintained industrial-sized equipment
- Safely handled hazardous materials
- Internally tested and produced new products for consumers

#### *Lab Technician R&D (Jan. 21 - Sept. 21)*

- Maintained inventory and prepared ingredients for product test runs
- Shipped finished products out to remote testers
- Tracked expiration dates for product disposal

## EDUCATION

### RUTGERS UNIVERSITY - New Brunswick

B.A. in Biological Sciences

Fall 2015 - Spring 2019