

## Experience

### **Narvar (Lumi acquisition)**

*Dec 2021 – Nov 2023*

#### *Lead Software Engineer*

*Narvar is a post-purchase platform for e-commerce. They purchased Lumi for mid-market acquisitions and packaging platform parallels.*

- Worked alongside packaging experts to balance the needs of clients and suppliers in various marketplace feature developments.
  - Developed a reply-by-email feature with mailgun and platform notifications, involving webhooks, footer parsing for metadata, and integration with in-platform messaging.
  - Led full-stack feature implementation and triage of customer requests. For example, a change to client development requests to facilitate packaging campaigns; involved large rewrites to the schema and completely new form-wizard flows.
- Updated the platform for security compliance and helped optimize performance and observability.

**Technologies:** Haskell, Purescript, React, PostgreSQL, Zapier, Mailgun, AWS, CloudFormation, Stripe/Plaid/Payoneer integrations

### **Lumi**

*Nov 2017 – Dec 2021*

#### *Lead Software Engineer*

*Lumi was a marketplace platform for collaboration between clients who need packaging and suppliers who can manufacture it.*

- Led product development initiatives over 4 years of product changes. Involved in hiring and mentoring along with process creation like retrospectives, code review, internal tooling work, etc.
- Built tooling to enable code generation to comprehensive api bindings to increase correctness in frontend calls. (See “Code gen bridge talk” below for preliminary impl. )
- Worked on complex DSL for product specifications alongside packaging professionals, incrementally building out functionality for supplier needs; involved postgres jsonb representations of detailed supplier specifications with generated frontend forms and data migrations.

**Technologies:** Haskell, Purescript, Javascript, React, PostgreSQL, Zapier, Mailgun, AWS, Docker, Digital Ocean

### **AndAnd LLC**

*Jan 2016 – Jan 2018*

#### *Owner*

*AndAnd was a software consultancy specializing in API, iOS, and Web Development*

- Acquired software contracts in the fields of large-scale geo-coordinate build systems to inventory management systems.

- Helped a client display a customized clark-scarf-type multi-echelon inventory management system for internal product owners.
- Feature development and maintenance of python (flask) server endpoints for a clustered heatmap build system which used mesosphere and scala
- Built relationships with recurring clients and fostered new ones within our small team

**Technologies:** Ruby/Rails, Python/Flask, Haskell/GHCJS, Nix, Javascript, MySQL, Hadoop, Scala

## **VennPT**

*Jan 2016 – Jan 2018*

### *Co-founder*

*VennPT was a Physical Therapy app for iOS and Web. The therapist could make custom videos of specific exercises for their clients and develop the routines via the mobile app.*

- Planned, designed, and built a Rails API to service the iOS app
  - Video encoding was handled by AWS elastic transcoder and user security concerns were HIPAA complaint
  - Worked in a small team to develop a prototype in 3 months and shipped a fully functional app within 6 months; used in a few clinics to service physical therapy exercises

**Technologies:** Ruby/Rails, PostgreSQL, Swift, AWS Elastic Transcoder, Elastic beanstalk

## **Zest Finance**

*May 2015 – Aug 2016*

### *Software Engineer*

*Zest Finance is a credit underwriting company with software to access credit risk and supply underwriting technology via machine learning.*

- Built REST APIs and client adapters for micro-services in a loan servicing platform.
- Competed and won internal hackathon building a chatbot servicing application
- Taught industry and technical patterns in internal engineering presentations (See the “Generating parsers talk” below)
- Worked closely with data science team for data-pipeline and containerization needs
  - Helped integrate LIME-explainer into certain flows for understanding ML decisions
  - Led many data-munging tasks in python and set up performant docker-backed notebooks for the machine learning teams.

**Technologies:** Ruby/Rails, MySQL, Python, Docker

## **Other companies**

*Mar 2013 – Feb 2015*

- Full-stack software engineer – Sports Engine (2014–2015)
- Full-stack web developer – Sparkweave (2013–2014)

## **Presentations**

[Code gen bridge talk](#)

presentation on generating frontend types from your backend api

[Generating parsers talk](#)

presentation focused on using haskell parsers for financial data

[Reflex FRP and reactive interfaces](#)

slides for a meetup: GHCJS reactive framework, Reflex, and some basic FRP concepts

## **Code**

[github.com/tippenein](https://github.com/tippenein)

### **countable-inflections**

Haskell library duplicating rails countables

### **TU<sub>41</sub> parser**

An FFR parser for Transunion credit data. (Used as an internal tool and example for talks at Zest). Also, includes jupyter notebook of uses [here](#)

### **Bank Holiday**

A Haskell library for identifying and doing date-math around bank holidays

### **L-System experiment**

An OpenGL display for L-System experiments I was interested in