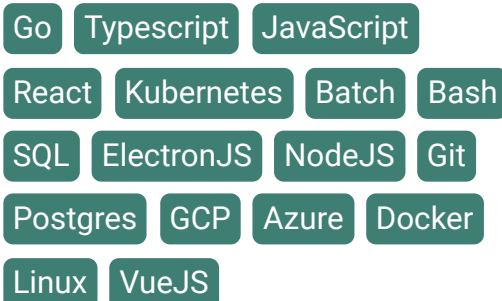




## Personal Statement

I am a product-orientated full-stack software developer. My go-to tech stack is Go and Postgres for the backend and React and Typescript for the frontend. However, I consider myself a polyglot as I am willing to use and learn the best language for the job at hand. Additionally, I have a keen interest in cybersecurity, and I also participate in bug bounty programs where I have found numerous critical vulnerabilities in popular products.

## Technologies Used



## Employment History

### **Schoolyear, Full-Stack Developer - Contract March 2021 - December 2021**

- Re-writing legacy API in Go
- Security auditing and documenting anti-cheat technology
- Security hardening of anti-cheat inside ElectronJS exam client
- Load-testing to ensure a stable for exam season
- Supporting and adding features to legacy Angular frontend
- Re-write of frontend in VueJS
- Migration from DynamoDB to Postgres

### **Dropbar, Technical Founder September 2020 - February 2021**

- API and DSL created in Go
- Visual Programming language created in Typescript and React
- User-Interviews and research
- Lead generation
- Product demos and outbound sales
- Developer docs and technical writing

### **Talon.One, Senior Go Backend Developer September 2018 - August 2020**

- Maintaining and Improving Go API
- On-call to resolve critical systems issues out of hours
- Monitoring core systems to catch problems before they cause an outage
- Reviewing of pull requests to help spot bugs and ensure a high standard of code
- Benchmarking and experimenting to improve the speed and reliability of our product
- Optimizing SQL queries and Postgres config
- Assisting team members with troubleshooting and knowledge sharing

### **Freelance, Pentester March 2018 - August 2018**

Participating in open bug bounties, I found and disclosed multiple instances of the following bugs; XSS, SSRF, AWS infrastructure takeovers, AWS secret leaks, exploiting misconfigured AWS buckets, CSRF, and Clickjacking.

### **GrandVision, Infrastructure Engineer February 2017 – February 2018**

### **Patagonia, IT Support June 2016 – January 2017**

### **DAS Legal Expenses Insurance, Network Support Analyst September 2011 - June 2016**

# Projects

## Bookmark Llama - BookmarkLlama.com

Bookmark Llama is a micro saas product that allows teams to share bookmark folders natively in the browser. The backend is Go, and the frontend is Typescript and React. The product is already actively used by large companies and is helping teams communicate better around the resources they use.

## Dropbar - Product

Dropbar was a product that allowed users to create data-driven promotions without writing code. The product allowed e-commerce platforms to pass data on Customers, Shopping Carts and SKUs and then use our custom visual programming language to create unique promotions around them. The backend API and DSL that powered the visual programming language is Go, and the frontend is React and Typescript.

## Talon.One - Database Layer Optimization

The Talon.One API is very sensitive to latency, and we would often get very bursty traffic patterns. Since the product integrates directly into e-commerce order flow, it must respond to requests as fast as possible and handle traffic spikes, as downtime leads to a loss of e-commerce sales. When scaling the product, our most significant limitation was our legacy database communication layer. I redesigned this layer to reduce database transaction times and improve database access patterns. Because of this work, API throughput was doubled without any increase in server load.

## Talon.One - Loyalty Engine

The existing Loyalty engine was not fit for production; as a result. I redesigned it from scratch to be flexible and scalable. The system was a success, and because of forwarding thinking database design, we were able to make use of clever indexes on the Postgres side to prevent slow-down regardless of how large the loyalty point ledger grew. This system powers loyalty for large companies such as National Express & Ticketmaster.

## Talon.One - Permissions System

As the company began to acquire more enterprise customers, we needed a permissions system that allowed for very granular permissions. I built this system based on my experience dealing with enterprise products in previous roles and was able to design and complete a zero-downtime migration to it. Additionally, to this, the new permission system significantly security-hardened our product.