

# Hydrogen

hello@thehydrogen.xyz

## Experience

DEC 2021 - PRESENT

### **Ghast Holdings LLC, Remote- *Web Development***

At Ghast Holdings, I joined a team of extremely talented developers. I created a frontend panel for their customers and a backend API for the panel which interacted with their pre-existing backend architecture.

NOV 2020 - PRESENT

### **CosmicMedia LLC, Remote- *Web Development***

At CosmicMedia, I work on both frontend and backend development. We work on a video-sharing platform named Vanillo. We create many of our own solutions, such as a custom video encoding pipeline built on Kubernetes and BullMQ - which is built to scale across multiple machines.

OCT 2021 - PRESENT - FOUNDER

### **Wattage Technologies, Remote- *Protocol Engineer***

At Wattage Technologies, I work on creating novel cheat detection methods. Among many concepts is a complete physics recreation of the player on the server side, allowing for the detection of any unauthorised modification to the client. Currently, in the best-case scenario, there is a  $0.0-1E-27$  movement offset from legitimate players, supporting large amounts of extremely complex scenarios.

JUL 2021 - PRESENT - FOUNDER

### **Solarswift, Remote- *Gameplay and Web Development***

Under Solarswift, I have developed a server network, including; modifications to Spigot for performance improvements, a server core, a Practice core capable of supporting many different game modes, a Soup core, a custom player queuing system built using Redis, a custom forum with Minecraft integration, and many more custom solutions.

SEP 2021 - MAY 2022 - CO-FOUNDER

**Void Anticheat, Remote- *Protocol Engineer***

At Void Anticheat, a colleague and I developed a flexible, long-term cheating solution. We performed rigorous testing upon each of our detection concepts and created stable checks, which were deployed to production and proved effective at thwarting cheaters.

JUL 2020- JUN 2021

**Almix LLC, Remote- *Gameplay and Web Development***

At Almix, I worked on a custom Minecraft network named "Fold Network". I developed a custom queue system, made modifications to their existing core, and integrated it into the custom forum software I developed for them - which displayed in-game data online.

OCT 2020- MAY 2021

**Cursed Games, Remote- *Protocol Engineer***

At Cursed Games, an Australian minigames server, my job was to create their anti-cheating system. During my time there, I developed Nemesis, a custom solution that fit their needs with a good balance of great detections and minimal false positives.

AUG 2022 - PRESENT

**Sparky Technologies, Remote- *Protocol Engineer***

At Sparky Technologies, I worked on implementing an accurate, precise check to combat cheaters extending their hit ranges and gaining an unfair advantage. The tracker the check used was accurate to more than 10 decimal places, with the check being able to detect any extension higher than  $\sim 0.00025$  (due to protocol limitations).