

# Joshua De Matas

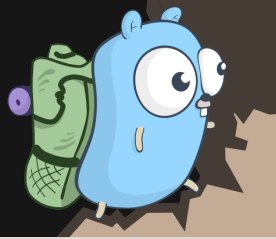
## Software Engineer

<https://www.joshuadematas.me>

Jönköping, Sweden

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## Summary

Operating at a **senior level** — leading projects, designing architecture, and building tools across domains. I've built backend platforms, SSH tunnels, and CLI tools, always with a focus on performance, clarity, and maintainability.

## Noteworthy projects

### BURNR — Tech Lead and Backend Engineer

A social fitness platform built primarily in Go.

- Led backend design, service boundaries, and tech stack decisions.
- Designed hybrid storage using PostgreSQL, Firestore, and Cloud Storage.
- Integrated Apple Health syncing and leaderboard ranking based on user goals.
- Upgraded caching and pub/sub with Dragonfly and Redpanda.
- Deployed backend on self-hosted VPS using Docker Stack/Swarm.

### Garden Observer — Real-time 3D Robot Visualization

A full-stack web app to monitor live and simulated robot lawnmowers in 3D.

- Combined Unity Wasm for 3D rendering with Blazor for UI and control layer.
- Parsed SVG layouts to generate meshes for 3D environments.
- Used an internal event hub for real-time robot telemetry, updating position in 3D space.
- Created a Blazor-to-Unity component bridge (akin to custom React renderer).

### Coconut — SSH-Based HTTP Tunnel

An HTTP tunnel over SSH in Go (similar to Ngrok), using only standard libraries.

- Designed reverse proxy routing based on subdomains and SSH channels.
- Added multiplexed and dedicated tunnels to handle websockets and long-lived connections.
- Currently building a production-ready version with full monitoring and tests.

### Cinnamon — Self-Hosted Media Server

Created a self-hosted service to capture and store HLS video streams.

- Built a Go backend using FFmpeg to convert and stash videos.
- Integrated MinIO (S3 compatible) storage and built a lightweight web UI.
- Developed a custom browser protocol (cinnamon://) to launch downloads from the web.

## References

### Tommy Gustavsson, Software Architect

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Husqvarna Group, Work/character reference  
(prefers email first)

### Thomas Jansson, Lead Senior Software Engineer

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Husqvarna Group, Work reference

### Malin Janrup, Technical Project Manager

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[LinkedIn](#)

Husqvarna Group, Character reference

## Technical skills

Go Docker GCP React

Terraform PostgreSQL Redis

Redpanda OpenTelemetry C#

Sqlite Unity Javascript

S3 storage Github SQL

## Hobbies

Programming, digital games, board games, and sometimes art.

I enjoy making random programs and exploring solutions. Lately, I've been diving deeper into the internals of the tools I use — exploring how things really work.

## Currently exploring

I am currently exploring [Deterministic Simulation Testing](#), a concept I first encountered through [TigerBeetle](#). The talk [Testing Distributed Systems w/ Deterministic Simulation](#) sparked my interest and offers great insights.

# Experience

Programming since 2015, professional since 2020. Software engineering is both my profession and creative outlet.

## Tech Lead, Senior Software Engineer

BURNR

2024 - Now Remote

Go

GCP

Pub/Sub

Redis

Firestore

PostgreSQL

Terraform

Grafana

Prometheus

OpenTelemetry

- Leading a small team in building a robust platform.
- Primarily built around GCP using Terraform.
- Using simulation-based and Testcontainers-driven testing to validate system behavior.
- Mentoring two junior engineers, supporting their growth through code reviews, architectural discussions, and pair programming.

## Software Engineer

Husqvarna Group, Robotics R&D

2022 - 2024 Husqvarna, Sweden

Go

Azure

Unity

DotNet

C#

Blazor

Algorithms

- Started with simulation software in Unity, then moved into broader R&D tooling.
- Later positioned as an internal project incubator and successfully led four projects from concept through implementation and launch.
- Developed internal tools that resolved key pain points and improved workflows across teams.
- Maintained a high standard across diverse domains – from Blazor and 3D web to Azure, algorithm optimization, CLI tools, and backend services.

## Software Engineer

Jönköping University, ROL Ergo

2021 Jönköping, Sweden

PostgreSQL

NodeJS

Express.js

Vue

Socket.IO

- Collected heat and motion sensor data that was visualized in a web UI.
- Enhanced sensor data usability by processing over 15 sensors in real time.

## Laboratory Engineer

Jönköping University

2020 - 2022 Jönköping, Sweden

Docker

AWS

Go

Swift

C++

NodeJS

SQL

- Created technical guides on Docker, MS SQL, and iOS development used in student instruction.
- Mentored over 25 students across two academic years.
- Taught subjects such as databases, data structures and algorithms, OOP, Node.js development, iOS development, and network programming.

I'm deeply excited about programming – it's more than a job; it's what I do for fun. I love building systems that are useful, durable, and a joy to maintain.

# Education

## B.S. Computer Science

Jönköping University

2019 - 2022 Jönköping, Sweden

# Scholarship

## Jönköping University

Chosen as one of the top-performing students to compete in a coding challenge at Jönköping University. Awarded a 15,000 SEK scholarship for building a full-stack admin system with React, Node.js (NestJS), Redis, and PostgreSQL.