

Arvid Hallstroem

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<https://arvid.engineering>

Education

University of Glasgow

BSc (Hons) Computing Science, Graduating in July 2027

Member of the University Tech Society

EU (SWE) citizen, currently authorized to work in the UK



Technical Skills

Programming Languages: Java (Primary), Python (Secondary)

Experience with DB products: SQL queries (mySQL), Git (basic) (*incl. GH actions*)

Linux Dabbler: Experience with Arch & Ubuntu flavors as my personal desktop

Projects

Side-Quests, Interest-based Projects

1 OAuth 2.0 Client Credentials flow demo

<https://auth.arvid.engineering>

Generates session key in JWT (signed) format, payload contains access scopes.

Hosted a JWKS endpoint to host the public key.

Allows users to verify JWT through JWKS.

Sets cross-subdomain cookie so that other services on the same domain can "see" the cookie.

Learnings for this project:

- Running Python on GCP's AppEngine PaaS
- Generating key pairs to sign JWT
- Verifying JWT token using JWKS
- Cross-domain cookies through Python-Flask
- Using Cursor (Claude 3.5/Sonnet) to build the JWT utility functions & the UI

2 Redis Write-through Cache demo

<https://cache.arvid.engineering>

Receives requests to write and read, all while implementing Redis as a write-through cache.

Redis and the MySQL VM is built inside a VPC.

Two users are created, one who can read & write to the DB; and the other who can only read the DB:

Access scopes implemented via login on auth.arvidproject.com. Performing actions on this project requires login into the auth project and permitted actions are scope-based.

Learnings for this project:

- Redis running on the GCP Memorystore
- Running MySQL on an Ubuntu VM
- VPCs, Firewalls
- Basic HAProxy config (as a reverse proxy & jump-server) for developer access to the Redis (as Redis was inside a VPC) on Debian Linux.
- Using Cursor (Claude 3.5/Sonnet) to guide me through configuration of GCP's VPC.

3 News Collector

An application that uses Microsoft Playwright RPA to scrape news headlines off select news websites and to store them in a MySQL DB.

Learnings

for this project:

- Microsoft Playwright RPA, with Java
- Running the Playwright job on Arch Linux