

Hallgrímur Davíð Egilsson

Computer Scientist

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Work experience

summer 2017 - now

Computer Scientist - DevOps

Svarmi

Focusing on Systems Architecture and DevOps for maximum scalability of Myriad. A network of self-chargeable drones deployable to industrial areas for frequent deliveries of processed aerial data. AWS, Docker, Kubernetes, OpenVPN, Bind9, CI/CD, TDD, GitLab, Python, Bash, Read the Docs

summer 2015 - summer 2017

Computer Scientist - Engineer

Svarmi

*Working on a proof-of-concept of Myriad.
Linux, ROS, Python, Bash, C++, Ardupilot, Git, Jira*

autumn 2016

Teaching assistant - Discrete mathematics

University of Iceland

*Weekly workshops with computer science students. Grading of homework.
Basics in discrete mathematics*

autumn 2014 = autumn 2015

Teaching assistant - Computer Science 1A

University of Iceland

*Weekly workshops with engineering students. Grading of homework.
Basics in programming*

Education

autumn 2016 = spring 2017

B.Sc. Computer Science

University of Iceland

Analysis of Algorithms, Theory of Computation, Discrete Mathematics, Functional Programming, Nonlinear Optimization, Software Development, Web Programming, Computer Graphics, Assembly, Operating Systems.

autumn 2013 = spring 2016

B.Sc. Mechanical Engineering

University of Iceland

Differential Equations, Physics, Probability, Statistics, Numerical Analysis, Linear Algebra, Control Systems, Fluid Mechanics, Chemistry, Vibrations, Economics Engineering, Microcomputers

autumn 2011 = autumn 2015

Private Pilot

Icelandic civil aviation administration

Experience

autumn 2015 = summer 2016

Formula student: Designing and building an electric formula race car

University of Iceland

Designed and built the wings for the car in a team of three engineering students focusing on aerodynamics.

autumn 2014 = spring 2015

University of Iceland's Robot design competition

Participating in a team of four engineering students. My team won the competition.

spring 2013

Programming competition

Participating in a team of three high school students. My team got second place.

autumn 2012

Youth symphony orchestra of Iceland

Played the harp at the concert hall Harpa in the suite "The Planets" by Gustav Holst.

Spring 2012 = summer 2013

Bassist/Harpist at Glundroði

Played in the folk rock band Glundroði. We played at a few venues and did studio recordings.

Projects

spring 2018 = now

Build Farm

Compile & Deployment server

Compiles & deploys software to Svarmi's drones. Receives source code from developers using rsync's delta-transfer algorithm and then proceeds to compile the code for Svarmi's drones environment and CPU architecture.

Python, CMake, ROS, Rsync, Socket Programming, Pytest

autumn 2017 = now

ROS VPN & DNS

Encapsulating Svarmi's network of drones

The VPN encapsulates Svarmi's ROS system with AES-256 encryption and the DNS allows our drones and servers to talk to each other using hostnames.

AWS, OpenVPN, Bind9, Linux, ROS, Bash

summer 2016 = now

GESTOS

Svarmi's on-board drone software

The soul of Svarmi's drones. Has a state machine, does CV calculations at 100 FPS, communicates to servers, streams data through 4G network connection, etc.

Linux, GPU, ROS, C++, Google Test

Programming

Experiments & mini projects

Link: <https://github.com/hallgrimur1471/programming>

Algorithms, Cryptography, Haskell, Google Code Jam, Advent of code, Machine Learning, C, Scheme, Python, Projecteuler.net (56 problems), Pwnable.kr (6 problems)

Autolock

Automatically lock/unlock car by proximity

Link: <https://github.com/hallgrimur1471/autolock>

C++, Bluetooth LE, RSSI

Asteroids in 3D

Playable in a browser

Link: <https://github.com/hallgrimur1471/asteroids-3d>

Javascript, WebGL

Map Image Marker

Automatically places uploaded geo-tagged images on map

Link: <https://github.com/hallgrimur1471/mim>

Exif data, Javascript, Node.js, Leaflet

Gran Turismo Lap-time logger

Logs laptimes by analyzing a twitch.tv video stream

Link: https://github.com/hallgrimur1471/gran_turismo_datalogger

Linux, GPU, ROS, C++, Google Test

summer 2016 = now

Gran Turismo Lap-time logger

Svarmi's on-board drone software

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Image analysis (text recognition, etc.), Selenium, Python

Languages

English

Icelandic (native)