# Hallgrímur Davíð Egilsson

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# Work experience

autumn 2018 - now
**CTO**
Svarmi
*Managing development of Myriad. A network of self-chargeable drones deployable to industrial areas for frequent deliveries of processed aerial data.*
*Agile, AWS, CI/CD, TDD, GitLab, Read the Docs, Python, Bash, Docker, OpenVPN, Bind9*

summer 2017 - autumn 2018
**Computer Scientist - DevOps**
Svarmi
*Focusing on Systems Architecture and DevOps for maximum scalability of Myriad.*
*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 in the orchestral suite "The Planets" at the concert hall Harpa.*

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

# Languages

English
Icelandic (native)