

Illugi Breki

MATHEMATICIAN · PROGRAMMER · EMBEDDED

Flúðasel 44, 109 Reykjavík

☎ (+354) 8675805 | ✉ illugi@illugi.com | 🏠 www.illugi.com | 📞 illugi317 | 🌐 IllugiFinnsson

Summary

Ambitious, cooperative, and patient individual with a strong passion for computers and teaching // Thrives on tackling new and challenging projects, regardless of their size // Possesses solid programming skills and have experience with Python, C/C++, and Go // With robust background in system administration on Linux platforms

Curious person with particular interest in discrete mathematics and application it's to computer security and secure communications // Deeply drawn to embedded firmware projects.

Skills

DevOps	Linux, Kubernetes, AWS, Terraform
Back-end	Django, REST API's, DSA, Databases(MongoDB & MySQL)
Programming	Python, C/C++ & Go
Languages	Icelandic, English
Soft-Skills	Communication, Problem-solving, Adaptability, Critical Thinking

Work Experience

Eirr Medical

Reykjavík, Iceland

EMBEDDED DEVELOPER

November 2024 - Now

- Analyzed and selected compute options (MCU/processor) for an ai-enabled device, balancing low power with on-device ml capability and required interfaces (camera, display, sensors, security).
- Migrated embedded development workflow from STM32CubeIDE to CMake and CLion build system, establishing reproducible build environments with GNU ARM toolchain, Ceedling/Unity/CMock testing framework, and GitLab CI/CD integration
- Designed and developed firmware architecture for a Class 1 medical device using STM32N6 microcontroller with ThreadX RTOS, implementing message queue-based IPC with defined task responsibilities and safety classification rationale compliant with IEC 62304

Controlant

Reykjavík, Iceland

EMBEDDED SOFTWARE DEVELOPER

February 2024 - August 2024

- Designed and developed embedded software using FreeRTOS, optimizing code for real-time performance and low power consumption
- Enhanced the Hardware Test Automation system by integrating programming at the beginning of tests to ensure a default state and automating button-pushing sequences, leading to strongly enhanced, consistent and reliable test outcomes. Leading to expedited delivery of innovated devices
- Collaborated within an Agile team to design, develop, and test embedded software

Controlant

Reykjavík, Iceland

JUNIOR QUALITY ASSURANCE ENGINEER

May 2023 - February 2024

- Developed and designed a Hardware Test Automation system to simplify regression testing - Integrating AWS, Gitlab, Docker & Python
- Managed an internal QA backend API used throughout the organization, providing dependable test infrastructure and smooth integration for all development teams.
- Learned the basics regarding cloud computing and AWS services, such as S3, EC2, EKS and Terraform

Skema, Háskólinn í Reykjavík

Reykjavík, Iceland

PROGRAMMER / ASSISTANT PROJECT MANAGER

August 2018 - May 2023

- Designed software to manage all servers and staff written in Python/Django + Go
- Created a Go script to simplify server upgrades
- Developed learning material and teaching methods to simplify teaching programming to students and teachers
- Taught children aged 4-16 & primary school teachers basic programming to use in their own classroom (Scratch/Python)

Multitask ehf

Neskaupstaður, Iceland

IT TECHNICIAN

May 2019 - August 2019

- Automated ship location broadcast with a Raspberry Pi that connected to the internal ship GPS and sent it to the marine sat network, creating a cheap and effective solution
- Tested hospital fire protection systems and installed fire protection systems for the local police station
- Created and designed a CCTV system from scratch

Education

Reykjavík University

BACHELOR IN DISCRETE MATHEMATICS & COMPUTER SCIENCE

- Average grade above 8
- Unfinished, 20 ECTS left

Reykjavik, Iceland

Aug. 2020 - —

Maastricht University

EXCHANGE PROGRAM

- Participated in a 6-month exchange program.
- Participated in a research project - "Intelligent dice integrated with serious games"
- Analyzed data using signal processing & learned radio communication with C (LoRa communication)

Maastricht, Netherlands

May 2022 - Jan 2023