

Greig Huth

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🌐 GreigHuth

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EDUCATION

University Of Edinburgh - Computer Science BSc Hons | Second Class Division 1

July 2021

Coursework: Computer Security (95%), Operating Systems (86%), Software Testing (95%)

Honours Project - Extensive Evaluation of State of the Art Network Stacks

Evaluated the single-threaded latency and throughput performance of both FreeBSD and Linux when dealing with high numbers of concurrent network connections (up to 1000). I wrote a custom high performance HTTP server to achieve this, and definitively showed that FreeBSD scales better with high connection volume than Linux does.

PERSONAL PROJECTS

Game Development Projects

- Technologies: Lua, Blender, Unity
- Building a 2D retro game in Pico-8 to develop my game programming skills and experiment with creative design concepts. As well as the programming I am also working on the art and music.
- Learning about the 3D rendering pipeline using blender and importing custom models into the VR game Blade And Sorcery.

HTTP Response Server (<https://github.com/GreigHuth/ghttpd>)

- Technologies: C, Linux, FreeBSD
- Built a HTTP response server from scratch used to benchmark network performance when working on my dissertation.
- Multi-threaded and cross platform (Linux and FreeBSD) to ensure portability and high performance.

GameTracker Discord Bot (<https://github.com/GreigHuth/GameTracker>)

- Technologies: Discord API, Python, SQLite
- A robust and accurate Discord bot that has been used to track the games played by over 6000 Discord users across 4 different servers.
- Takes full advantage of asynchronous programming techniques to ensure data is tracked accurately and is efficiently processed

EXPERIENCE

Systems Administrator - SmartR

Sep 2021 - Present

- Technologies: Debian, Podman/Docker, NGINX
- Helping with new remote infrastructure deployment for machine learning as well as consulting on prospective hardware purchases.
- Set up containerised services to aid company productivity, this includes: self hosted website and nextcloud instance, Gitlab VCS, and SSH service.
- Consulting on security infrastructure and practices to ensure the company is up to standard.

IT Support Administrator - Snag Tights

May 2021 - July 2021

- Technologies: Python, Shopify, HTML/CSS/Liquid, Google API, Microsoft Excel
- Worked directly with the CTO to keep up the day-to-day running of the company, assisting with tasks such as web page design and database administration.
- Used Python to automate time-consuming administrative tasks to streamline company operations.
- Implemented new systems to better track the ever growing number of employees and assets in the company.

Server Admin - UofE Gaming Society

March 2019 - April 2021

- Technologies: Debian, Bash, NGINX, Jekyll
- Built and configured a new machine to support the growing number of users and services within the society.
- Wrote a basic static site for the society (<https://www.edingamesoc.co.uk/>).

Tutor/Demonstrator - University Of Edinburgh

Sep 2020 - April 2021

- Technologies: C, Linux, Streamlabs OBS
- Assisted tutoring of 1st and 2nd year informatics students on the basics of low-level systems programming.
- Live streamed an interactive online session teaching students the basics of Linux and how to use the command line effectively.
- Prepared and presented tutorials teaching 3rd year undergraduates about network and systems security.

System Administrator - The TARDIS Project (<https://tardis.ed.ac.uk/>)*October 2019 - November 2021*

- *Technologies: Proxmox VE, Debian, Apache, Bind9, pfSense*
- Set up accounts for new users and help new people with becoming part of the TARDIS project.
- Configured a new, updated web-server to allow TLS certifications to be managed easier.
- Liaise with university staff to help diagnose issues and assist with system outages.

Project Manager - University Project (BookBot)*January 2020 – April 2020*

- *Technologies: Bootstrap, Python(Flask), SQLite*
- Lead a team of 10 students from diverse backgrounds, managed team workload during high-stress situations
- By the end of the project we built a robot that was able to locate, navigate to, collect and deliver the book to the user, in a controlled environment.
- Built the front-end and back-end of a robust website allowing users to request books from the robot.

President - UofE Gaming Society*April 2018 – March 2019*

- Organised and ran a video game tournament with 32 participants and enjoyed by over 50 attendees.
- Planned events over the year to increase social interaction among EUGS members and foster the spirit of the gaming community within Edinburgh.
- Membership doubled from 100 to almost 200 members during my time as president.