

Thomas Keatinge Creagh

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Personal Profile

I'm a third-year Computer Science student at Trinity College Dublin with hands-on experience in software development, data analytics, embedded systems and cyber security research. I enjoy working close to the hardware and building scalable applications in Python, Java, and Go. My interests include low-level programming such as Zig and cyber security research. I'm driven by solving complex technical problems and turning ideas into working, efficient systems.

Education

01/09/2023 - 01/05/2027 - Trinity College Dublin, Computer Science

Experience

Career Service Technology Intern, Trinity College Dublin

01/06/2024 - 01/09/2024

- As a part of my internship I made a disability audit of the Career site. I made an example site of how they could improve design and accessibility using Next.js and tailwind. They will be using both of these to improve their current website. I was also working with another intern to give more information about scholarships on the Career site.

Lead Data Analyst, Dlt-Capital

01/06/2023 - 01/09/2024

- When I worked at DLT Capital I made a location based house price index application for the Irish housing market, using Golang, Next.JS, MongoDB and Python. I used the Pandas and Dask libraries for analysing 20+ million lines of data in an efficient way. This was then used by MyHome.ie.

Machine Learning Intern, Maynooth University

01/06/2023 - 01/07/2023

- Created models for new Nvidia Camera AI chips to detect where a person is in a space and measure their distances. Implemented these models into a pipeline, broadcasting the data to a dedicated website designed for displaying real-time information. This was to help detect where the limited medical equipment was within a hospital.
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Projects

Zallet

- Zallet is my first blockchain project with a wallet. I wrote it in zig and used Ed25519 Signing to encrypt transactions between wallets. I used Sha256 to hash the blocks on the chain. I used the proof by work method to verify blocks on the blockchain.

Morse Code Game

- Created an interactive game to teach users Morse code, combining C and ARM assembly. Implemented the main game logic in C and wrote subroutines in assembly to handle GPIO and alarm interrupts. Designed to run on a Raspberry Pi with buttons, LEDs, and a buzzer, enabling real-time feedback and hands-on learning.

Sweng2025 IBM Project

- Developed a full stack code security reviewer application for IBM using Fast API, Next JS, Ollama with full Docker integration. Created a CICD pipeline with Gitlab and used Hetzner, Traefik, Gitlab runner and Docker hub for the deployment server. Worked in a team of 8 with weekly scrum meetings, reviews with the client and monthly live demos.

32 Bit Processor

- As part of my Computer Architecture module, I designed and modeled a 32-bit processor in VHDL using Vivado. For each component, I created corresponding test benches, schematics, timing diagrams, and truth tables to verify correct functionality. The project was developed in stages, covering the Register File, Functional Unit, Data Path, and finally the Full Processor.
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Competitions

DLT Capital All of Ireland (1st), NASA Space App (2nd local prize), Hack Trinity (Participated), Huntress CTF (In Competition)

Skills

Programming Languages: Python, Java, Zig, C, Arm Assembly, Rust, Go, VHDL, x86 Assembly

Software Skills: Low Level Development, Backend Development, Data Analytics, Algorithms, Git, Linux

General Skills: Communication, Creativity, Strategic thinking, Problem Solving, Systems Architecture