
Toby Towler

Computer System Engineer

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PROJECTS

TType

C++, nCurses, TUI

Terminal based typing speed game written in C++. ncurses library for text user interface.

Maths Interpreter and plotter

F#, C#, Functional Programming

Maths interpreter allowing many operations, variable assignment and graphing.

Digital Traffic Light Control System

Quartus, Logic, FPGA

I developed a system to control the flow of traffic using digital logic gates.

“Bop It” Type Device

STM32, C, User experience, embedded systems

I developed an embedded system using an STM32 board and various sensors requiring a series of inputs from the user at varying difficulties for points

Analogue Amplitude Modulation

Analogue electronics, frequency modulation, device calibration

I developed a system to take digital audio from a computer, finetune frequencies of the electronic signal, transmit it across a metal bar, and convert it back to digital audio

SKILLS

Programming languages - C++, C, Python, Java, Lua, Bash, F#, C#

Version management - Git, Github

Embedded systems - STM32, low level C

Operating Systems - Fedora Linux, Bash, Windows

Teamwork and management - Project organisation, task delegation, time management

Presenting - Presented many university courseworks, confident demonstrator,
Answering questions from customers about procedures or products

EXPERIENCE

Sainsburys, Ipswich/Norwich - *General Online Assistant and Driver*

Dec 2021 - PRESENT

- Working in a team, organising and distributing products
- Customer interactions

BT, Adastral Park - *Work Experience*

July 2019 - July 2019

- Developed several web pages
- In a team recreated a website

EDUCATION

University of East Anglia, Norwich - *Computer systems engineering* *Beng*

Sept 2022 - June 2025

- Achieved over 70% in my first and second years
- On track to achieve a first as my final grade
- Modules in Embedded systems, programming, electronics, networking

Hartismere Sixth Form, Eye - *A Levels*

Sept 2020 - June 2022

- Physics - B
- Computer Science - B
- Mathematics - D

Debenham Highschool, **Debenham** - *GCSEs*

Sept 2015 - June 2020

- Mathematics - 9
- Computer Science - 7
- English 4/5
- 6/7 in Physics, Biology, Chemistry, RE, DT, Histor

Dear reader,

I am excited to apply for the software engineer role at Mercedes AMG. As a motivated and detail-oriented individual, I am eager to contribute my skills and passion for low-level software and hardware development to your team.

Currently, I am in my third year of a BEng degree in Computer Systems Engineering at the University of East Anglia (UEA). Through coursework and personal projects, I have developed strong skills and interests in programming, electronics, networks, and embedded systems.

My academic journey has deepened my interest in the intersection of hardware and software. I have undertaken diverse projects, including designing a logic-based traffic light system, creating an analog microphone encoder and amplifier, and developing a knockoff "BopIt" game planning both hardware and software. My current third-year project focuses on an embedded robotic lawnmower, where I am currently responsible for both random and from an aerial image map generation, as well as complete coverage path planning.

Beyond academics, I have pursued additional software projects in my free time. I am proficient in C++, Python, Java, and other programming languages, and I particularly enjoy optimising code, making it as efficient as possible

As someone with Asperger's syndrome, I approach problems with a unique, algorithmic perspective that enables me to identify patterns and craft effective solutions. It also lends me an ability to memorize and notice patterns or structures, for instance in large code bases.

I would be delighted to discuss how my skills and experiences align with the needs of your team. Please feel free to contact me via the details below. I have also included links to my project portfolio for your review.

Thank you for considering my application. I look forward to the opportunity to contribute to Mercedes and to grow as a professional in this field.

Best regards,
Toby Towler

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