

> Samuel\_Burford@UKC~\$:

HTML

C#

Java

C

C++

Python

JS

CSS

GLSL

Computer Science @ University of Kent, Canterbury, England

• Software Engineering • Micro-Controller Programming • Graphics Programming • Web-Dev •



## Skills

Developer with more than five years of experience, combining self-taught expertise with formal training. Possessing a diverse skill set spanning programming languages and the stages of application development.

## Languages

**Proficient** in lower-level languages, including the C family of languages (*C*, *C++*, *C#*) in applications ranging from micro controllers to graphics programming. Similarly versed in *Java* and *Python*.

**Confident** in web-based development, covering *HTML*, *JS*, *CSS*, *MySQL*.

**Competent** in other languages, APIs and libraries.

## Tools



**GitHub** – Used in most projects for 4+ years. Strong understanding of source control, branching, pull-requests.



**VS Code (+ Visual Studio)** - IDE of choice, leveraging relevant add-ons for efficient and clean code.



**Linux** – Developed projects on/for Linux systems for 2 years, with experience in command line interfaces.



**VIM** – Comfortable using VIM for CLI-centric applications, demonstrating a comprehensive knowledge of shortcuts.



**Jet Brains (IntelliJ + Fleet)** - Used for Java-based projects, utilising the tailored toolsets.



**Arch** – Experience with Arch-based Linux, both with and without a desktop environment.



**Ubuntu** – Experience using Ubuntu (Debian) based Linux and Ubuntu Server.



**Manjaro (Arch)** – OS of choice for an extensive period, demonstrating in-depth lower-level OS knowledge.



**Flutter** – Experience creating cross-platform & full stack, native and web applications.



**Mac (OSX)** – Versed in the usage of Mac operating systems, drawing similarities from Linux-based systems.



**Blender (3/4)** – Proficient and fast in 3D modelling, with many years of hobbyist experience. Capable of creating clean and efficient topology.



**Maya (Autodesk)** – Recently began learning the industry-standard 3D modelling tool Maya as part of the Autodesk suite of tools.



## Projects

### LED Screen Calculator (Universal Pixels Ltd. Summer 2024)

• Dart • Flutter • Node.js • MySQL •

Developed a comprehensive calculator application to streamline the quoting process for large LED screen rentals. The application features a front-end calculator built in Dart and Flutter, a Node.js REST API connecting to a custom MySQL database, and a secure API front-end for database management. This solo project involved constant collaboration with project managers to ensure that user needs were met, resulting in a competitive edge for the client in the industry.

#### Key Learnings:

- Full-stack development experience with Dart, Flutter, and Node.js.
- Proficiency in RESTful API design and database management with MySQL.
- Importance of user feedback and rapid iteration in software development.

### Touch Down Interface

• Arduino • C • WebSocket •

Created on a *Teensy 4.1 (Arduino)* as middleware between physical touch-down buttons and a *Black Magic Video Router*. Using *Black Magic's* network protocol and a web server with WebSocket functionality for debugging and configuration of the Arduino.

The interface facilitates intuitive and quick routing of different camera outputs to monitors for video engineers.

A Large application built from a complex project structure with distinct functionalities, including a parser for the *Video Router* and collaboration between a *web server* and *WebSocket* for debugging and configuring. Please see the: [GitHub page](#).

#### Key Learnings:

- Integration of components into a cohesive, shippable product.
- Practical experience in developing a substantial project with diverse functionalities.



## Experience

### Universal Pixel Ltd. (Summer 2024)

Website: <https://universalpixels.com/>

Email: [hello@universalpixels.com](mailto:hello@universalpixels.com)



## Education

University of Kent at Canterbury (2022 - Present)

*BSc – Computer Science with a year in Industry.*

*Theory of Computing | Computer Systems | Algorithms | AI | Database Systems  
Functional Programming | Software Development | Cyber Security*

The Cottesloe School 6<sup>th</sup> Form (2020-2022)

*A Level – Computer Science (B) | Mathematics (B) | Physics (C)*

*AS Level – Further Maths (B) | EPQ (B)*

*The Cottesloe School (2016-2020)*

*GCSE – Computer Science (9)*



## Contact

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LinkedIn: <https://www.linkedin.com/in/sammburr>

**Reference** (Matt Mapleston): [matt@theGeekery.uk](mailto:matt@theGeekery.uk)

## Other

- Full UK Driving Licence.
- Keen rock climber 7+ yrs.