

Lucille L. Blumire

Who am I?

Born 24th September 1997 in High Wycombe, Buckinghamshire
RTW British Citizenship
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Work Experience

Principal Fullstack Engineer at Element Human Jan 2023–Jun 2023

Building AdTech solutions enabling companies to pre-test their advertisements and receive feedback based on facial expression, emotion, and attention detection by analysing webcam footage from a test audience. The backend was built primarily out of Python/Django backend services and a React frontend, with GCP providing the ops layer. I led a rewrite of the core client facing data API from python into Rust/Axum, and substantially improved its performance and uptime through this rewrite. My employment will end in June as the company downsizes to avoid bankruptcy.

Rust Engineer at Modeldrive Mar 2022–Sep 2022

Building a new generation of data modelling software to compete with the ubiquitous spreadsheet. The server backend was built in Rust/Axum, and the core data evaluation engine was built in Rust and compiled to WASM to run in browser on the client device. In my time there in addition to extending the software and fixing bugs in Rust, I built the real time communication engine in Typescript, which enforced data synchronisation between peer-to-peer connected clients using CRDTs and Operation Transformations. The company went bankrupt in September 2022.

Backend Engineer at Prima UK Jan 2022–Feb 2022

Providing modern and comprehensive car insurance. The company developed fast, automated, and efficient insurance cover and claims processes in Italy and began its expansion into the UK. The technology being built in the UK was primarily built in Elixir with a common services used across regions provided in Rust.

Rust Engineer at MotionMetrics Sep 2020–Dec 2021

Developing a wearable technology ski coach in the form of a “smart insole”. Sensors in the insole and attached to the boot transmit data to the Swift/Kotlin iOS/Android applications, which then communicate over FFI with a Rust codebase defining common business logic to process the data and give in ear feedback. Data is then synchronised with Rust/Axum servers to store and persist the data, and provide later reprocessing. I led a complete rewrite of the piste detection system using modern geospatial algorithms, a redesign of the in ear feedback system to eliminate repeated advice and improve performance uplift, and assisted data science with a large upgrade to the model in mid 2021 to allow for precise turn by turn analysis (instead of requiring a completed run).

Technical Consultant at Brace IT Sep 2016–Sep 2020

In 2016 as I began my studies at the University of Reading. Brace IT graciously allowed me to transition to a remote consulting role. See “Systems Engineer at Brace IT” overleaf for more details. After graduation, I resumed this work full time, however the company faced bankruptcy as AWS and other cloud providers replaced local hosting.

Teaching Assistant at The University of Reading

Sep 2018–Feb 2020

At the start of my third year of studies at The University of Reading I took on responsibility as a teaching assistant for first and second year students. This role greatly expanded as I worked it, and resulted in me eventually writing the teaching materials for and teaching the entire first year C programming course. The teaching materials I produced in this time period are still used (as of 2023) at the University.

Systems Engineer at Brace IT

Jun 2015–Sep 2016

Brace IT had two main product lines, both of which I was heavily involved in:

1. Providing end-to-end development and on premises hosting for local businesses, schools, and charities. This work was done largely in PHP, extending Wordpress with bespoke plugins to suit each businesses needs, such as complex survey systems for data collection, and automated report and certificate generation.
2. Developing a synchronization system for short stay lettings and hotels to keep their calendar availability, and pricing (Prop-Sync). This was built as a Java/Spring monolith application.

In addition to those two primary sides of the business, I also developed internal tooling which was used to automate our deployments and upgrade testing. I wouldn't go so far as to call it "DevOps", though there was certainly skillset overlap.

Junior Systems Administrator at Brace IT

Jun 2014–Jun 2015

I first joined Brace IT as a junior hire, working on the internal network infrastructure, setting up new network interfaces, and building out a DMZ to improve our security in line with requirements for a local government Job the company took on at the time. In addition to this, I set up the on premis email hosting, and was partially responsible for deploying new virtual machines to Hypervisor, and maintaining and updating existing deployments to new software versions.

Other Roles

TTRPG and Board Games Officer at GARPS

Apr 2023–Current

The University and Reading Games and Roleplay Society holds gatherings of over 100 students and members of the local community (up to 40% non student membership) multiple times per week. One of these, which takes place on a Monday, is my responsibility to organise and host. In addition to organising several additional standalone events throughout the year.

Oraniser and Technical Lead at Reading Trans Movement

Apr 2022–Current

Co-organising community events with a small team, for public gatherings, demonstrations, and protests frequently attracting over 100 people. Building, updating, and hosting the <https://readingtransmovement.co.uk> website.

Server Owner at Necrotic Gnome Discord Server

Sep 2020–Current

Moderating and running a large and active discord community with 4000 members and hundreds of messages each day. Coordinating with Necrotic Gnome on news and announcements. Managing and overseeing the rules and procedures, and leading the rest of the moderation team.

Lead Community Moderator at reddit.com/r/conlangs

Sep 2014–Dec 2019

Interacting with and running a large community (over 40,000 members when I stepped down in 2019). Including rules enforcement, helping members, and representing the community at conferences.

Preferred Technologies

Rust

Since 2015

The Rust Programming language is a passion of mine, and I adopted it just before it's 1.0 stable release in May of 2015. Initially, it was used for academic projects of mine, as well as a few Ludum Dare game jams. I then began using it commercially on some internal tooling at Brace IT, and used it on all University work that did not require a specific language choice (including my final year dissertation). I was hired for my first full time role using Rust in 2020 at MotionMetrics. Since then, all roles I have worked have hired me for my Rust experience and specialization.

Within Rust, I am comfortable with a large range of widely used libraries, including Axum, Rocket, and Tonic for server side API development. I have also worked with FFI to provide on device shared primitives between iOS, Android, and Python at MotionMetrics, as well as deploying to WASM for use on client side websites at Modeldrive.

Typescript & ECMAScript

Since 2010

While I learned Javascript back in 2010 (during the jQuery era) as part of developing a CMS for a blog myself and a friend were running at the time, I have kept up to date with modern Javascript development practices, including Typescript, React (and NextJS), Solid (and Solid Start), Svelte (and Svelte Kit), Vue and (Nuxt). I've used many of these commercially recently while helping out with front end development, with projects at Element Human and Modeldrive using React with Next, and those at MotionMetrics using Vue with Nuxt.

PostgreSQL, MySQL

Since 2010

Various database technologies have followed me throughout my career, starting out in MySQL for the CMS project mentioned above, and the Wordpress websites I maintained and extended at Brace IT. These days, I maintain a high degree of proficiency in modern database technologies such as Vitess, and prefer to write SQL directly rather than relying on an ORM or other DSL to manage the database.

Other Technologies Used

It would take far too long to give all the technologies I have used as a developer a complete section to themselves, so I have instead chosen to pull out and highlight some above, and am listing the rest alphabetically. If you do not see something listed, please reach out to ask as I may have missed it.

AWS, Android, Apache, Axiom, C, C#, C++, CSS, Clerk, Cordova, Cypress, DNS, Datadog, Django, Dovecot, Drupal, Elixir, GCP, Git, Github, Gitlab, Go, HTML, Java, Java, Jupyter, Knime, Kotlin, Kubernetes, Lua, Matplotlib, Nginx, Nix, PHP, Pandas, Phoenix, Planetscale, Postfix, Python, Python, R, Redis, SBS, Spring, Swift, Tailwind, Upstash, Vercel, WASM, Wordpress.