Willem Garnier

Full Stack Web Development · Software Development · Mathematics

Fluent Languages
English / French

Nationality
French

Date of Birth
1996-07-15

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Experience

Senior Cloud Developer Checkit Ltd.   **2021 – present**

> Part of a team responsible for the full-stack oversight and continual development of a multitude of microservices charged with processing large datasets efficiently and reliably on a global scale.
> Involved with **high-level design and architecture decisions** for the platform, which made extensive use of **AWS** services (such as **Lambda**, **SQS**, **IoT**, amongst others).
> Developed and maintained backend services built using a **node.js** + **TypeScript** stack typically consisting of **koa.js**, **TypeORM**, **PostgreSQL** and/or **MongoDB**.
> Worked on front-end applications built mostly using **React.js**, with some maintenance of legacy **Angular.js** apps.
> Managed and wrote infrastructure-as-code using **Terraform**.
> Brought the **Go** language to the company for some of its newer projects, developing several libraries for internal use.

Software Developer Luminance Ltd.   **2018 – 2021**

> Full-stack development of a feature-rich modern web application, with a focus on front-end application development. In particular responsible for much of the low-level architecture of an in-house MVC-style web application framework.
> Worked on a **node.js** backend running **express.js**, **PostgreSQL** and **ElasticSearch**.
> Created interactive visualisations supporting datasets of up to millions of documents, both using **d3.js** for 2D charting, as well as **Three.js** + **native GLSL/WebGL** for 3D rendering.
> Led the development of a new MS Office Add-in, designing both the framework and architecture, and the **UI/UX** itself.
> Regularly involved with the teaching/training of new developers.
> Experienced with **Jenkins** (CI) and **Git** (SCM), as well as significant general **Unix** command-line experience.

Student Supervisor The University of Warwick   **2017 – 2018**

> Organised, planned, and ran weekly classes for a group of first year Maths undergraduates, serving as a mentor while offering teaching and guidance for all areas of their degree. Provided feedback on assessed work.

Club Coach & Captain Warwick Ultimate Frisbee Club   **2017 – 2018**

> Coached a club of over 100 students with abilities ranging from complete beginners to players more experienced than myself. Responsible for planning and running up to 5 weekly training sessions. Regularly co-ordinated with the student's union, as well as other clubs throughout the country.

Communications Officer Warwick Ultimate Frisbee Club   **2016 – 2017**

> Organised and ran multiple media campaigns aiming to recruit members through a variety of mediums (video, print, online advertising, and more). Maintained the club's WordPress website, as well as other online presence.

Teaching Assistant Campion School, Leamington Spa   **2016**

> Assistant teacher in the school's Maths department, teaching students of varying abilities between the ages of 11 and 18, including one-on-one support classes with A-level students, as well as struggling year 9 students.

Software Developer OsmozaCare Poland   **2013**

> Developed a PHP-based webportal allowing the company to train its customers in the use of its products.

Education

MMath in Mathematics The University of Warwick, UK   2014 – 2018

> Four-year integrated **Bachelor's** + **Master's** degree course in Mathematics.
> Graduated with **1st class honours**.
> Thesis explored delay-colourings of bipartite graphs, attempting to prove an outstanding conjecture with direct implications on the design of fibre optic communication networks.
> Took part in an out-of-department, coursework-based Machine Learning module which covered in detail many modern techniques, ranging from simple k-NN classification algorithms to recent Convolutional Neural Networks.
> Covered a wide range of disciplines including linear and complex analysis, group theory and algebra, chaos theory, fractal geometry, knot theory, as well as more applied disciplines such as probability theory, mathematical modelling and computer-aided mathematics/physics.

IB Diploma The British School of Warsaw, Poland   2012 – 2014

> Graduated with a total of **41 out of a possible 45 points**.
> Subjects taken at a higher level: Mathematics, Physics and Computer Science. Achieved grades of 7, 7, and 6 respectively (graded out of a maximum of 7 each). Subjects taken at a standard level: Psychology, English, Spanish.

IGCSE The British School of Warsaw, Poland   2010 – 2012

> Subjects included Mathematics at an extended level (A*), Physics (A*), Chemistry (A*), and Biology (A*), among others.

Skills

Programming & Problem-Solving

> Self-taught at an early age by taking an interest in game development and modding. First formal programming experience was in Java through the IB computer science course, which was mostly self-taught.
> **JavaScript/EcmaScript** - Very confident with most if not all aspects of the language, have been using this professionally and in side projects in a wide variety of contexts. Have experience building full applications from scratch using a javascript stack.
> **Go** - Confident with the language, having used it in a professional setting to build internal libraries such as SDKs, API clients and a terraform plugin.
> **Python** - Quite confident with most aspects of the language, used for a lot of personal projects and extensively at university, in particular for my Machine Learning course, as well as several computational physics courses.
> **GLSL** - Used to build 3D visualisations which required custom-built shaders to stay performant on large datasets.
> **Rust** - Not used professionally, but have been very interested in the language and learning it in my own time.
> I have used both **C** and **C++** a few times - in particular for a high-performance computational physics university course. I built some custom graphics shaders using **GLSL** to keep 3D visualisations performant on very large datasets. My IB Computer Science course was **Java**-based, and I am very confident in both **HTML** & **CSS**.

Leadership & Teamwork

> Learned many valuable, transferable leadership and organisational skills as a team captain and coach for a large university club. Learned to effectively resolve conflicts between club members, and act as a leadership figure.
> Responsible for leading several successful cross-team projects.

Communication & Organisation

> Experience as a teaching assistant, as a student supervisor, and even as a coach has taught me to communicate information clearly, effectively, and appropriately for a variety of target audiences.
> Have presented products being developed to non-technical audiences of investors and other stakeholders.
> Learned valuable organisational skills in particular when balancing my degree and thesis with being a student supervisor responsible for marking multiple weekly assignments in a timely manner.