

SOUMIA SARAH BEKHLI

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EDUCATION

King's College London

Bachelor of Science in Computer Science

United Kingdom, London

Sep. 2023 – May 2026

Clapton Girls Academy

A-levels: Computer science(A) Mathematics(A) Product design(A)

United Kingdom, London

Sep. 2021 – May 2023

EXPERIENCE

Hydroficient IoT Cyber Defense Externship

Oct 2026 – Present | In progress

Extern

Remote

- Developed a threat model for a hotel water-monitoring IoT system, identifying critical assets, potential attack scenarios and associated security risks.
- Conducted a CIA triad analysis across 6 assets, rating confidentiality, integrity and availability requirements on a 1–5 scale.
- Mapped 6 cyberattack types — including man-in-the-middle, denial-of-service, spoofing and replay attacks — to system assets and evaluated potential operational impacts
- Prioritised 6 attack scenarios based on potential consequences for water supply, leak detection, emergency controls and system availability.

Year 6 Teacher

May 2026 – Oct 2026

Date Palm Primary

London, United Kingdom

- Planned and delivered lessons across 10+ subjects for a Year 6 class of 16 pupils, adapting materials to meet different learning needs.
- Managed classroom administration, pupil records, and multiple deadlines, ensuring 100% accuracy in documentation for 38 students across 2 classes. .
- Coordinated with 5+ teaching/support staff to organise learning activities and support pupil progress.

Special Educational Needs (SEND) Teaching Assistant

Sep 2025 – May 2026

Date Palm Primary

London, United Kingdom

- Guided 5 pupils with special educational needs, adapting learning activities to individual needs.
- Prepared 3 termly progress reports, documenting development, learning progress and support needs.
- Monitored and recorded pupil progress and behaviour, communicating observations to teaching staff to inform support strategies.
- Maintained confidentiality of sensitive pupil information for 38+ students, adhering to safeguarding procedures and ensuring compliance with institutional policies.

General Teaching Assistant

Sep 2024 – July 2025

Date Palm Primary

London, United Kingdom

- Facilitated classroom learning for 17 pupils , helping deliver activities and explain tasks.
- Prepared resources for 10+ lessons per week, supporting efficient classroom operations.
- Monitored engagement and learning progress, reporting observations to teaching staff to support timely interventions.

PROJECTS

Vector Clock Visualiser | Python, JavaScript, React, Flask, REST APIs, Google Gemini API, D3.js, Git, Vitest Oct 2025 – Apr 2026

- Developed an interactive distributed systems visualiser using React, JavaScript and D3.js to demonstrate vector clocks and causal ordering between events.
- Built a Python Flask backend with REST API endpoints to connect frontend functionality with server-side services.
- Integrated the Google Gemini API to provide AI-assisted explanations of distributed systems concepts.
- Implemented automated tests using pytest and Vitest to validate backend and frontend functionality.
- Evaluated the application using Lighthouse, achieving 92 accessibility, 100 best practices and 90 SEO scores.

Network Security Group Coursework | Wireshark, Linux, Mininet, iptables

Feb 2026 – Mar 2026

- Built a virtual network topology using Mininet, configuring three hosts and a switch to simulate network communications.

- Simulated ICMP flooding and TCP SYN flooding attacks, including IP spoofing, to investigate denial-of-service attacks and their impact on network performance.
- Incorporated Wireshark to inspect network traffic and analyse attack behaviour, including spoofed source addresses and incomplete TCP connections.
- Evaluated attack impact by comparing network throughput under normal and malicious traffic conditions, finding significant performance degradation during attacks.
- Collaborated in a three-person team to investigate network attacks and defensive measures, including iptables firewall rules to rate-limit malicious traffic.

Quizmos | *Django, Python, JavaScript, AWS EC2, Git*

Jan 2025 – Apr 2025

- Contributed to the implementation and testing of real-time response functionality for a polling web application with separate student and lecturer roles.
- Coordinated with a 7-person team and contributed to project documentation.
- Achieved 100% in the project assessment.
- Deployed the application on AWS EC2, configuring the cloud-hosted environment to make the application accessible.
- implemented real-time response functionality, supporting the submission and handling of student responses to polls.

TECHNICAL SKILLS

Languages: Java, Python, C++, SQL (Postgres), JavaScript, HTML/CSS, Scala

Frameworks and APIs: React, Node.js, Flask, REST APIs, Google Gemini API

Cybersecurity and Networking : Wireshark, TCP/IP, ICMP, Mininet, iptables, network traffic analysis, denial-of-service attack simulation, IP spoofing

Cloud and Developer Tools: AWS EC2, Git/GitHub, Linux, VS Code, PyCharm, Cursor

LANGUAGES

Arabic : Native/Bilingual

English : Native/Bilingual

French : Intermediate