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| **JOB DESCRIPTION** | |
| **Job title:** | Senior Software Developer |
| **Team/Department:** | CLEO |
| **Location:** | Remote |
| **Hours of work:** | 37.5 hours (On Call Rotation – Out of Hours) |
| **Job title the post holder will report to:** | Principal Software Architect |
| **Job titles reporting to the post holder:** | None |
| **Date the role profile was revised:** | August 2025 |
| **JOB PURPOSE**  As a Senior Software Developer at Cleo Systems, you will play a key role in designing, building, and maintaining robust, high-performance backend services that power our healthcare applications. You’ll work with modern technologies including Node.js, Redis, RabbitMQ, Postgres, and Docker to deliver scalable and secure software that directly supports clinicians and patients.  You will take ownership of critical technical components, contribute to architecture decisions, and collaborate with cross-functional teams including DevOps, Product and QA to ensure high-quality delivery. Your experience in event-driven systems, microservices, and containerised environments will help shape our evolving platform.  This role is ideal for an experienced engineer who enjoys solving complex problems, writing clean and efficient code, and mentoring others to uphold best practices in software engineering. Experience or comfort working in AWS environments is desirable. | |
| **KEY RESPONSIBILITES AND ACCOUNTABILITIES**   * **Backend Development:** Design, develop, and maintain backend services using Go (Golang) and/or Node.js. * **Messaging & Asynchronous Workflows:** Build and manage reliable messaging patterns using queues such as RabbitMQ and Pub/Sub patterns. * **Database Design:** Develop efficient and scalable queries and schemas using PostgreSQL. * **API Design:** Develop clean, RESTful APIs and contribute to internal and external API documentation. * **Containerisation:** Aid inbuilding services in containerised environments using Docker. * **Code Quality:** Write testable, maintainable code and contribute to peer reviews, testing, and CI/CD pipelines. * **Architecture & Design:** Contribute to architecture discussions, system design decisions, and technical roadmap planning. * **Mentoring & Collaboration:** Share knowledge, guide junior developers, and foster a culture of continuous learning and engineering excellence. * **Cloud-Native Mindset:** Contribute to or maintain services deployed on AWS infrastructure using services such as ECS, Lambda, or RDS. | |
| **COMMUNICATION AND KEY WORKING RELATIONSHIPS**  The post holder must be able to demonstrate excellent communication and interpersonal skills at all times, and build and maintain good working relationships with all stakeholders. | |
| **ENVIRONMENT**  CLEO Systems is a subsidiary of healthcare provider IC24, which has been developing IT systems for around 30 years for its own use. CLEO Systems started offering these and other new systems into the marketplace in 2019 as a ‘challenger’ to more established larger systems suppliers – and after 9 months or so, the market is welcoming its innovation and CLEO Systems has already broken-even from a financial perspective.  The parent company IC24 is a major not for profit Social Enterprise company currently providing innovative primary care services designed to deliver quality and affordability. IC24 is solutions-focused, providing a comprehensive portfolio of services aimed at improving access and reducing the demand on secondary care services by helping to avoid unnecessary admissions and facilitating early discharge.  Going forward, the company is committed to supporting and enabling better integration between health and social care and more effective alliances between partners from different sectors as essential to delivering seamless services. IC24 has considerable experience of working in complex, demographically challenged environments and the Board is keen for the organisation to be proactive in improving standards of care and patient safety, while delivering value for money too in the health economies it which it operates. Critical to this is building strong professional relationships and alliances with third parties; working with them in a way that maximises the benefits of their involvement.  We are proud of our status as an NHS primary care social enterprise, and how we deliver social value to the communities we serve and contribute to the wider NHS plans to deliver carbon ‘Net Zero’ and sustainability. To find out more on this and to view our Social Impact Report, please click [here](https://ic24.org.uk/annual-reporting/). | |
| **HEALTH AND SAFETY**  The post holder will be required to comply with the duties placed on employees of CLEO Systems as set out in the Health and Safety at Work Policy and related procedures. The post holder has a legal obligation to make positive efforts to maintain their own personal safety and that of others by taking reasonable care, carrying out requirements of the law and following recognised codes of practice.  All Colleagues  You have a duty to take care of your own health and safety and that of others who may be affected by your actions at work. You must cooperate with managers and other colleagues to help everyone meet their legal requirements under health and safety law, and not to interfere with or misuse anything that's been provided for your health, safety, or welfare.  Managers  You must ensure you know and understand your responsibilities as defined in our health & safety policies and associated guidance documents. You must identify and assess any risks to people, property, or the environment and ensure all colleagues you have responsibility for, are aware of all our health and safety policies, understand issues arising from risk assessments, site inspections etc. and deal with any associated concerns. You must ensure that all accidents or incidents involving colleagues within your responsibility, are properly reported, and investigated and that regular inspections are undertaken and recorded to eliminate potential hazards and minimise risks.  Directors  You must ensure that all colleagues and teams within your region and/or department(s), effectively manage health and safety in line with all our health & safety policies and guidance documents. | |
| **EQUALITY AND DIVERSITY**  CLEO Systems and IC24 have a Diversity and Inclusion Policy to ensure that no job applicant or employee is discriminated against either directly or indirectly on the grounds of disability, marital status, sex, race, colour, nationality, ethnic or national origin, sexual orientation, age, religion or political opinion, whilst attracting talented recruits and retaining experienced employees.  We are committed to promoting equal opportunities and diversity and will keep under review its policies, procedures and practices to ensure that, in addition, all users of its services are treated according to their needs. | |
| **INFORMATION GOVERNANCE**  Information is vitally important for the safe clinical management of patient care and the efficient administration of services and resources, including our workforce. Information Governance is a framework to enable CLEO Systems and IC24 to handle personal and corporate information appropriately.  It is the responsibility of our entire workforce, regardless of employment status, to ensure they abide by the requirements of Information Governance as set out in the Data Security & Protection Policy. | |
| **SAFEGUARDING CHILDREN AND VULNERABLE ADULTS**    We are committed to safeguarding and promoting the welfare of children, young people and vulnerable adults. All colleagues and volunteers are therefore expected to behave in such a way that supports this commitment. You will be responsible for safeguarding the interests of children and adults who you come into contact during your work. To fulfil these duties, you will be required to attend training and development to recognise the signs and symptoms of abuse or individuals at risk, to follow local and national policy relating to safeguarding practice and to report and act on concerns you may have appropriately. | |
| **DISCLOSURE AND BARRING SERVICE CHECKS**    CLEO Systems and IC24 will require a DBS check for appropriate roles which is a mandatory requirement and a condition of the employment offer.  All posts are assessed on their eligibility for the post holder to be required to undertake a DBS check. For posts that have been assessed as exempt from the provisions of the Rehabilitation of Offenders Act 1974, CLEO Systems and IC24 will require the post holder to undertake an enhanced DBS check with barred list checks. For posts that have been assessed as being in a position of trust, CLEO Systems and IC24 will require the post holder to undertake a basic DBS check.  This post has been assessed as requiring a basic DBS check. | |
| **REHABILITATION OF OFFENDERS ACT 1974**  Some posts have been assessed as being exempt from the provisions of the Rehabilitation of Offenders Act 1974 and in these cases CLEO Systems and IC24 will require the post holder to disclose all convictions, whether spent or unspent.  This post has been assessed as not being exempt from the provisions of the Rehabilitation of Offenders Act 1974; therefore the post holder is not required to disclose any spent convictions. | |
| **PERFORMANCE AND DEVELOPMENT REVIEW**  This job description will be used as a basis for conducting an individual Performance and Development Review between the post holder and the manager. | |
| **VARIATIONS**  This job description describes the main purpose and key responsibilities and accountabilities of the post. The post holder may be required to undertake any additional duties or responsibilities as may reasonably be required.  This job description is a guide to the nature and main duties of the post as they currently exist, but it is not intended as a wholly comprehensive or permanent schedule and it is not part of the contract of employment.  To reflect changing needs and priorities, some elements of this post may be subject to change and where required, any appropriate communication or consultation with the post holder will be undertaken prior to making any changes. | |

**PERSON SPECIFICATION**

| **Requirements** | **Essential** | **Desirable** | **How identified** |
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| **Qualifications and training** | Educated to degree level or equivalent professional experience. | AWS Experience |  |
| **Experience** | 8+ years of experience in backend development roles  Strong proficiency in Node.js with expert understanding of Javascript (EC6+ features) and core modules such as fs, http, stream and events etc.  Proven experience with Redis (caching and Pub/Sub) and RabbitMQ (messaging)  Strong experience with relational databases, particularly PostgreSQL with proficiency in indexing, performance tuning and transaction management  Form understanding of Authentication and Authorisation using OAuth and OpenID Connect.  Solid understanding of containerisation using Docker  Experience of building RESTful and GraphQL APIs and service integrations alongside an firm understanding of security, versioning and rate-limiting.  The writing and maintaining of unit and integration tests with tools such as Jest, Storybook and Mocha. | Experience with CI/CD practices and tooling  Familiarity with microservices and distributed systems architecture  Familiarity with event-driven or serverless architectures using AWS Lambda, EventBridge, or SQS  Familiarity with networking, DNS, VPNs, and secure communication protocols  Exposure to cloud infrastructure (especially AWS)  Experience working in Agile/Scrum environments  Understanding of security best practices for backend services |  |
| **Personal Attributes & Skills** | Strong problem-solving and analytical skills  Clear and proactive communication with both technical and non-technical colleagues  Passionate about clean code, documentation, and knowledge sharing  A collaborative mindset and commitment to team success  Self-motivated with the ability to work independently and manage priorities |  |  |