

JOB DESCRIPTION & PERSON SPECIFICATION

Job Title: Frontend Software Engineer	Location: Hunmanby, North Yorkshire
Department: Cloud Engineering Team	Contract: Permanent, Full-Time
Reports To: Team Manager (Cloud)	Direct Reports: N/A

1.0 Job Summary & Role

Deep Sea Electronics is a global leader in the design and manufacture of generator controllers, automatic transfer switch controllers, battery chargers, and vehicle and off-highway control systems. With over 200 employees across four continents, we supply our products to customers in more than 150 countries, both directly from our UK head office and through a well-established international distributor network.

Working as a mid-level Frontend Engineer within the Cloud Engineering team, the successful candidate will use React and TypeScript, ideally with Next.js, to design, develop, test and deliver the user-facing dashboard for DSE's IoT platform, DSEWebNet®, as it moves to a modern, componentised frontend architecture. You will build clear, accessible and reliable interfaces that enable customers to monitor and manage generator sets, transfer switches and other energy control equipment in near real time, using live WebSocket telemetry and REST/JSON APIs, while also supporting internal tools and business systems across DSE's energy control and automation products, including renewables, microgrids and off-highway machinery.

The successful engineer will have hands-on experience building production web applications, a strong testing and quality mindset, and a developing track record of frontend delivery. You will work collaboratively within a multidisciplinary team, act on technical guidance, take initiative, flag issues proactively and continue developing your frontend architecture skills. Good communication, a can-do attitude and a genuine passion for modern web technology and user experience will be advantageous, with the role offering valuable exposure to industrial controls, IoT systems and cloud-native best practices.

2.0 Key Responsibilities & Main Duties

Frontend development

- Build and maintain the WebNet web dashboard using Next.js, React and TypeScript, taking ownership of assigned features from requirements through to production
- Apply modern Next.js patterns appropriately, including the App Router, Server and Client Components, server-side rendering, streaming and caching strategies
- Develop reusable, accessible UI components and contribute to a shared component library and design system
- Implement clear, efficient data visualisation for live and historical telemetry (charts, status indicators, alarms, maps and tables)
- Integrate with backend REST/JSON APIs and real-time WebSocket feeds, handling loading, error, reconnection and stale-data states robustly
- Manage client and server state using appropriate tooling (for example TanStack Query or equivalent), keeping data flow predictable and maintainable



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- Implement forms and client-side validation with schema-based approaches (for example React Hook Form with Zod)
- Work closely with backend engineers on API contracts, typing and integration, including generating or sharing types where practical

Testing and quality

- Write and maintain automated tests across the testing pyramid: unit and component tests (for example Vitest or Jest with React Testing Library) and end-to-end tests (for example Playwright)
- Use API mocking (for example Mock Service Worker) to test components and flows in isolation from backend services
- Contribute to visual and component-level testing and documentation (for example Storybook)
- Meet agreed test coverage and quality standards, and help raise them over time
- Build accessibility into delivery, working towards WCAG 2.2 AA, including keyboard navigation, semantic markup and automated accessibility checks
- Monitor and improve frontend performance, including Core Web Vitals, bundle size and rendering efficiency

Delivery, tooling and operations

- Work within CI/CD pipelines using GitHub Actions, delivering code through automated linting, type-checking, testing, build and deployment stages
- Maintain good code hygiene using agreed tooling (for example ESLint, Prettier and strict TypeScript settings) and a modern package manager
- Develop and deploy containerised frontend workloads using Docker, working with the Cloud SRE on Kubernetes and hosting concerns as needed
- Assist in building frontend observability, including error tracking, real user monitoring and dashboards using Grafana and OpenTelemetry
- Support software deliveries through test, production and commercial deployment
- Collaborate with the Cloud SRE on operational matters and contribute to post-incident reviews where relevant

Ways of working

- Participate in requirements capture and contribute to frontend architecture and UX discussions
- Take part in code and design reviews, applying agreed coding standards and best practices
- Contribute to the improvement of development standards and SDLC practices as the team evolves towards a fully automated delivery process
- Demonstrate diligent use of company version control systems and good Git discipline
- Stay up to date with the React and Next.js ecosystem and bring forward suggestions where relevant
- Produce professional documentation as a key part of the full development lifecycle
- Support the team in ensuring reliability, quality, safety and security objectives are met, including secure frontend practices (authentication handling, input sanitisation, dependency hygiene)

3.0 Internal & External Relationships

- The Mid-level Frontend Engineer will report directly to the Team Manager (Cloud) and work within the Cloud Engineering team alongside two senior Cloud Engineers and other Cloud Engineers. They will receive day-to-day guidance and mentorship from



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the senior engineers and are expected to engage actively with that support, ask questions, and develop their skills over time

- Beyond the immediate team, the engineer will liaise with relevant parts of the wider business as required, including Engineering management, Test & Approvals, Technical Support and Product Management, and may work alongside external development partners. Good communication skills and a professional manner are expected in all cross-functional interactions
- The engineer will be required to periodically visit alternate business sites for training, information transfer and team cohesion. There may also on occasion be a requirement to visit customer sites

4.0 Key Performance Indicators

- Successful delivery of quality frontend features that meet requirements and are completed to agreed timescales
- Code meets agreed quality standards, test coverage expectations, accessibility and performance targets
- Low rate of escaped defects and regressions in delivered UI
- Demonstrable improvement in personal technical capability and output over time
- Good communication with both technical colleagues and managers
- Proactive engagement with mentorship, technical feedback and personal development
- Growing application knowledge of industrial control and IoT systems

5.0 Essential/Desirable Factors

Knowledge	
Essential:	Desirable:
• Strong working knowledge of React and TypeScript, including hooks, component composition and state management • Commercial or substantial project experience with Next.js (App Router experience preferred) • Solid HTML, CSS and responsive layout skills, including a modern styling approach (for example Tailwind CSS, CSS Modules or CSS-in-JS) • Experience writing automated tests for frontend code (unit, component and end-to-end) • Consuming REST/JSON APIs from a frontend application • WebSocket and HTTP fundamentals, including handling real-time data in the browser	• React Server Components, Server Actions and Next.js caching/revalidation behaviour • TanStack Query, Zustand or similar state/data-fetching libraries • Data visualisation libraries (for example Recharts, ECharts, D3 or similar) • Component libraries and headless UI primitives (for example Radix UI or shadcn/ui) • Storybook and visual regression testing • Frontend performance profiling and Core Web Vitals optimisation • Awareness of IoT technologies and protocols such as MQTT and edge devices



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- Competent user of Git for source control management - Understanding of web accessibility principles	- Familiarity with PHP backends (for example Symfony) or API contract tooling such as OpenAPI - Background in electrical systems or knowledge of the power generation industry - Exposure to Grafana or frontend observability tooling
Skills & Attributes	
Essential: - Excellent team player with collaborative problem-solving and debugging capabilities - A strong testing and quality mindset - Good eye for UI detail and user experience - Able to break down tasks and produce reasonable estimates of effort with guidance - Comfortable working in a fast-paced environment - Enthusiastic and optimistic, with a genuine passion for modern web and IoT technology - Receptive to feedback and mentorship, with a proactive approach to personal development - Good communicator with technical colleagues and wider stakeholders	Desirable: - Experience working with designers and design tools (for example Figma) - Experience with Agile/Scrum methodologies and Jira
Experience	
Essential: - Experience building and shipping a production React application - Some experience working within CI/CD pipelines (GitHub Actions preferred) - Familiarity with Docker and containerised application deployment	Desirable: - Experience with monorepo tooling (for example Turborepo or Nx) - Basic understanding of cloud platform concepts across GCP, Azure or AWS - Awareness of infrastructure-as-code concepts (Terraform and/or Ansible) - Grafana and OpenTelemetry observability tooling - Experience building dashboards or data-heavy operational interfaces



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Qualifications	
Essential: • Qualification or Equivalent Experience in Software Engineering or Web Development	Desirable: • Bachelor of Science in IT/Software Engineering or equivalent • Relevant cloud or frontend certification

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Cloud Team Manager	28/09/2026

