



Role Statement

Position title: GIS Digital Solution Developer

Position no: P68624

Classification: PO3

Review date: March 2026

Directorate: Land Administration

Business unit: Geospatial Information Services

About us

Our Department's primary objective is the delivery of homes and housing options for South Australians. In response to the national housing crisis, we are committed to accelerating the build of a diverse range of housing options. We strive to find solutions to the urgent demand for housing security.

Our mission focuses on coordinating various portfolios related to housing, housing infrastructure, urban development, and planning. By ensuring sound decisions and efficient management, we strive to create sustainable, well-planned communities offering safe and affordable housing options.

Land Administration a division of the Department for Housing and Urban Development is an innovative and impactful team of land and built environment professionals that manage the planning and land use systems and policy tools for the state. This includes Office of the Registrar General and the Office of the Surveyor General with a focus on creating more vibrant, diverse and engaging places for our communities to thrive.

Join us in our endeavour to address one of the most pressing challenges of our time and make a tangible difference in the lives of our community.

OUR VALUES: Professionalism | Service | Respect | Courage and Tenacity | Collaboration and engagement | Trust | Sustainability | Honesty and Integrity |

About this role

The GIS Digital Solution Developer is accountable to the Team Leader GIS Digital Solutions for the creation, maintenance and enhancement of Land Administration's Geospatial Applications. The role is also responsible for contributing to the planning and documentation of application architecture and tools, ensuring development work aligns with approved designs and standards.

The role develops and maintains geospatial applications following the architecture, patterns and design principles specified in the department's document repository (Confluence). All releases must be undertaken following approved change control processes and executed using the CI/CD source control and code pipelines.

This role requires a thorough understanding of geospatial concepts and expertise in integrating geospatial platforms such as MapLibre, React-Map-GL, and ESRI with React to develop advanced, spatially enabled web applications. Since all applications are delivered using the AWS cloud platform, strong proficiency in the AWS ecosystem is essential.

Who will you work with

- Reports to the Manager Geospatial Services
- Internal and External Stakeholders
- DHUD and other SA Government agencies

Conditions

- Some out of hours' work may be required.
- Some intra state and interstate travel may be required.
- Required to maintain a safe working environment by adopting appropriate hazard management practices consistent with the role.
- Compliance with Government legislation, Code of Ethics for the SA Public Sector, Departmental policies and procedures, including information management, WHS and injury management, risk management, and the access / equity / diversity strategies of the public sector.
- Required to obtain a National Police Check prior to employment. A renewal will be required every 3 years.

What you will do

Key responsibilities

Develop and Maintain React AWS Architecture

Specified duties

- Design, maintain and enhance AWS React architectures ensuring scalability and efficiency.
- Research trends relating to React and other core components to ensure application architecture follows best and current practice
- Maintain comprehensive documentation detailing current approved architecture.
- Provide solutions for React application issues and provide detailed documentation to go along with it.
- Ensure problem prevention methods are continually applied to improve service levels, provide root cause analysis and documentation of incidents.

Support and develop Geospatial React Applications

- Employ industry best practice development processes to develop and maintain React applications.
- Maintain React application related technical documentation.

Performance indicator/ measurement

- React application architecture is current, approved and well documented.
- All changes to existing or new applications follow approved architecture.

- Solutions are delivered within required timeframes to meet business deadlines.
- Solutions are extensively documented in confluence
- Change control and DevOps processes followed for the release of code from DEV to UAT to PROD.

Contribute to Culture

- Investigate and resolve React application issues and provide detailed supporting documentation.
- Continually apply problem prevention methods to improve service levels, including root cause analysis and documentation of incidents.
- Ensure libraries are kept up to date with current patch levels.

- Actively participate and contribute to responsible and safe work practices.
- Embrace diversity and cultural differences in the workplace.

- Work practices are safe and Work Health and Safety legislation, policies and procedures are adhered.
- Respectful behaviour observed when faced with diversity/differences in opinion.

The capabilities you will bring

Technical expertise

- Tertiary qualifications in Computer Science, Software Engineering, Geospatial Sciences, or equivalent discipline, or extensive relevant experience.
- Extensive experience delivering React applications using the AWS cloud platform utilising services such as Amplify, CDK, CloudFront, Lambda, ECS, S3 and API Gateway.
- Advanced knowledge of modern React development practices including hooks, context API, component lifecycle management, and performance optimization techniques.
- Experience in source control integration with build pipelines and the strict adherence to CI/CD principles for code deployments.
- Well-developed, applied knowledge of System Development and support Methodologies (DevOps, SDCL, Agile Development and ITIL).
- Extensive geospatial experience, using MapLibre, Deck-GL and ESRI tooling to develop spatial applications in React.
- Experience building and consuming geospatial Python libraries such as GDAL for the delivery of geospatial data via API's to React applications
- Experience using Typescript, MUI, JEST, Vite, Redux and Storybook snapshots.

Personal abilities

- Strong technical vision with ability to research emerging technologies, evaluate their applicability, and drive architectural innovation especially in regards to emerging trends in geospatial React libraries.

Experience

- Ability to gather business requirements and create specifications in easy to understand business language, gain signoff and then produce detailed technical requirements for delivery.
- Well developed communication skills enabling effective collaboration with cross-functional teams.
- Ability to work under tight timeframes with limited supervision.
- Proven track record delivering complex geospatial web applications and participating in effective code reviews.
- Substantial experience integrating geospatial libraries (MapLibre, React-Map-GL, Deck-GL, ESRI) with React frameworks to deliver production ready spatial applications including interactive mapping interfaces, spatial analysis tools, and geographic data visualisation.
- Experience developing geospatial applications with features such as parcel search, boundary visualization, spatial querying, and multi-layer map composition.
- Experience working in government or highly regulated environments with understanding of compliance requirements, security standards, and enterprise architecture frameworks.
- Experience with vector tile generation, optimisation, and serving using technologies such as Mapbox Vector Tiles (MVT), Tippecanoe, and PostGIS tile functions for high performance map rendering.
- Knowledge of cadastral, planning, and land administration mapping applications